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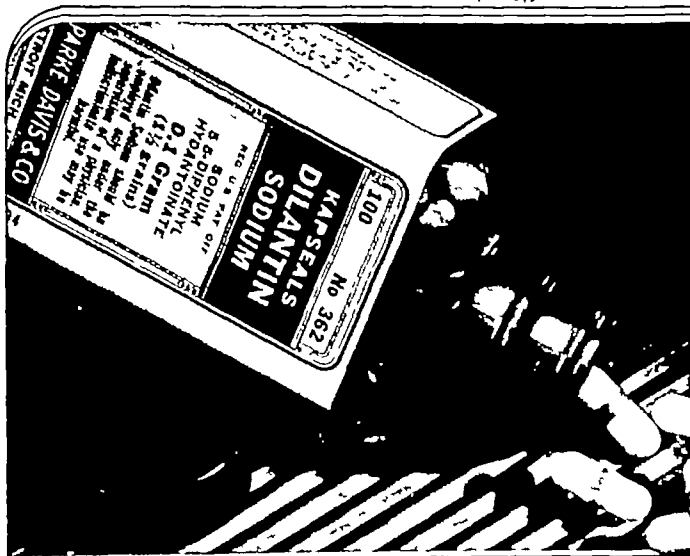
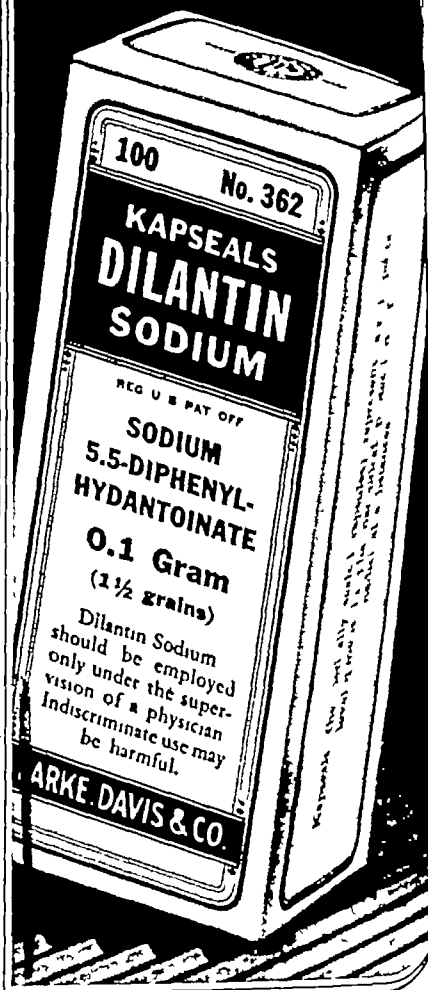
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# NEW YORK STATE JOURNAL of MEDICINE

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The American Way  
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"The best program for medicine should be the product of the best minds of the American people. I propose that it be written by physicians, and when approved by organized medicine that it be submitted to the Congress. I believe that we should try to find an American Way—built upon the sound foundations of American experience."

NATHAN B. VAN ETEN, M.D.,  
*President-elect, American Medical Association*

## The New Year

Even in America the New Year has some of the aspects of a fearful question mark. Can this country remain unsinged by the flames of war so rapidly sweeping Europe and Asia? And if it does, what social and economic price must it pay for peace?

These questions have special implications for physicians. War makes tremendous and unpredictable demands on medical skill. Man's instruments of destruction do not behave in the relatively orderly manner of pathogenic bacteria. The latter pursue a more or less certain course in accord with the laws of their nature. The wounds inflicted in battle are fit offspring of the anarchy and horror which are war.

Besides a vast amount of horrible trauma, war almost always brings epidemic disease in its train. The breakdown of sanitary conditions at the front, the assemblage of vast numbers of men in limited quarters, exposure, inadequate diet, anxiety, all contribute to a weakening of the normal resistance to disease.

It is the hope of everyone that this country will remain out of war. Nevertheless our medical resources must be prepared to cope with the fruits of war. Even if we escape the direct trauma of battle, we cannot hope to remain immune to possible outbreaks of disease, like the influenza epidemic which swept the country in 1918.

Apart from questions rising directly from the war, however, the profession has many grave problems to face at the outset of 1940. Social and economic conditions are changing, and the traditional pattern of medical practice must be adapted to the new times without sacrifice of essential values. This requires a discriminating, determined attitude toward medicosocial legislation, with ready adoption of desirable reforms and firm resistance to changes threatening the standards and independence of medical practice. If we desire to prevent compulsory insurance under bureaucratic control, we must bend our efforts to make voluntary medical expense indemnity insurance work. If we desire to escape political domination, we must assume an attitude of constructive leadership on all questions pertaining to the public health.

Medicine's position at the outset of 1940 is difficult but by no means desperate. Reactionary opposition to beneficial change has been routed within and without the profession by the aroused social conscience of the nation. Russia's recent course has given pause to the advocates of authoritarian state control of medicine or anything else. The middle road, always the highway of civilized progress, is no longer despised. Let us follow it—to a Happy New Year.

### On the March

Voluntary medical expense indemnity insurance is on the march in New York State. The first permit to operate a nonprofit plan has been granted to a Utica group which will serve twelve upstate counties with the cooperation of over five hundred physicians. A New York City corporation has applied for a permit to operate in the southeastern area. In the western end of the state a Buffalo group has launched a similar company.

There are definite statutory requirements which the organizers of such plans must bear in mind. In order to obtain a permit it is necessary to satisfy both the welfare and the insurance department. The former has ruled that an acceptable plan must be open to the participation of all reputable practitioners in the territory to be served and that the subscriber shall have free choice of physician subject to the latter's consent.

On the subject of management, state regulations are explicit. At least one-third of the directors shall be physicians and at least another third laymen. Even in medically sponsored plans this gives the public a substantial voice. All directors must be of such experience and standing as to guarantee their ability to administer the corporation's affairs in the best interests of all concerned.

Apart from strictly legal requirements there are several important considerations which should govern the organization of any plan for

voluntary nonprofit medical expense indemnity insurance. In the interests of responsible administration it is advisable for all groups seeking permits to have the approval of the State Medical Society and to be under trustworthy medical control in all essential respects.

The financial aspects of this type of insurance will have to be resolved by experience. It is obvious that premiums must be as low as possible to attract small wage-earners, the class it is desired to aid. At the same time they must be sufficient to permit reasonable compensation for participating physicians. If medical fees are inadequate, competent practitioners will be unwilling to cooperate. The current schedule for Workmen's Compensation has been proposed as a start.

In this type of insurance it is often feasible to dispense with preliminary medical examinations. Instead, a waiting period is set for disabilities resulting from pregnancy, malignancy, and comparable conditions.

Where administrative costs threaten to mount excessively, there may be a "ten-dollar-deductible" provision to eliminate the large volume of minor claims for sums which are not ordinarily a burden on the individual. In weighing the advisability of such a provision, the company should consider whether it would be likely to discourage early recourse to medical care.

The success of voluntary nonprofit medical expense indemnity insurance will go far to determine the future of private medical practice in this country. It is therefore of the utmost importance that such plans be in responsible hands and receive the cooperation of all reputable physicians.

## Prevention of Silicosis

The interest of industrial hygienists has recently been aroused by the report of Denny, *et al.*,<sup>1</sup> that the inhalation of powdered metallic aluminum prevents silicosis. From experimental evidence, it appears that the toxicity of silica comes from that portion which is in the dispersed colloidal form and this can be inactivated by aluminum when the latter is in close association with quartz in the body cells.

Rabbits, which were exposed to quartz dust alone, all developed silicosis within a period of seven months. On the other hand, where the quartz dust was mixed with metallic aluminum powder in a concentration of 1 per cent, no animals showed any evidence of silicosis up to periods of seventeen and one-half months. For the prevention of the disease, Denny and his co-workers suggest that the aluminum dust should be below 5 microns in particle size and be free from grease. The dust should preferably be uniformly mixed with the silica dust,

<sup>1</sup> Denny J. J. *et al.* *Canad. M. A. J.* 40 No. 3 (March) 1939.

but will also be effective if inhaled each day independently. In itself, aluminum dust showed no effect on the health of the animals, and no toxicity or tissue damage.

Metallic aluminum in the tissues is converted into hydrated alumina which, by flocculation, by the adsorption of silica from solution, and by covering the quartz particle with an insoluble and impermeable coating, is able to reduce the toxicity of quartz in the tissues.

## Problem of the Arthritic

For a considerable period of time, the dominant conception concerning arthritis was that it was solely the result of focal infection. Such is no longer the case. Intense investigation of the arthritic syndrome has made it apparent that there are certain physiologic deviations elsewhere in the body which are as important (if not more so) as the existence of an infectious focus in the production and course of rheumatoid arthritis. Pemberton's address before the American Rheumatism Association in May of this year<sup>1</sup> is an illuminating discussion of the considerations which must be evaluated in the treatment of arthritis. His pertinent remarks are all the more valuable because of the current interest in gold therapy for this condition, the most recent report being that of Soskin, Spanbock, and Kling.<sup>2</sup>

"The future may hold some single remedial agency which will reach to or near the heart of the oak but we are not yet in possession of it. Perhaps gold will prove as valuable to the patient in his body as it has proved to be in his pockets. *The somatic substrate of the arthritic subject, however, may not be so easily altered and usually needs a different approach.*"<sup>1</sup> [Italics ours.]

Since the care of arthritics is largely in the hands of the general practitioner, he cannot be blamed very much if, from the lack of co-ordination in the study of this disease, "he turns from academic negativism to the samples sent him by a drug house." The bacteriologist has his point of view, the pathologist considers only what the microscope reveals to him. But patients want relief from pain and from the incapacity to perform their daily tasks. At the present time, therefore, in the treatment of arthritis, the doctor must know how "to utilize the components of rest, to stimulate here and sedate there, to appreciate the significance of deficiencies or surfeits, to recognize and correct them, to discover an infection or other morbid nidus, to understand whether and when to remove it, to adjust his somatic and local mechanisms, in sum, to equilibrate the arthritic and treat him as few sufferers from other diseases are treated."

<sup>1</sup> Pemberton R. Am. J. Med. Sc. 198: 589 (Nov.) 1939.

<sup>2</sup> Soskin D. Spanbock J. and Kling D. H. J. of Bone and Joint Surg. 21: 723 (1939).

## The Annual Meeting

The new year is here The outstanding medical event of the year for us is our annual convocation This year it will be held during the week of May 6 at the Waldorf-Astoria Hotel in New York City It is too early as yet to announce the program of events, but it is not too early to reserve the dates

The hotel has arranged special rates, the program will be unusually attractive, and the social events will also be a feature of this meeting

At this time we are directing attention to this coming event, so that you may arrange to come to New York and participate

## Current Comment

"Good medical care has always been and always will be an individual service involving a close, personal confidential relationship between the patient and the physician of his choice and in the presence of such a relationship, it seldom if ever happens that the patient lets the doctor down in the matter of remuneration"—The October 14th issue of the *Weekly Roster and Medical Digest* discusses "Physicians' Remuneration" at some length, and brings out this point

"It is proper for a practicing physician to ask, 'What definite advantages may I expect from membership in the County Medical Society?'

"Physicians can protect their professional rights and privileges only through organization and united effort. It is groups and blocs rather than individuals which mould public opinion And it is groups and blocs which can exert the most influence in legislative halls The first great reason for membership in the County Medical Society therefore may be said to be self-preservation, the preservation of the private practice of medicine through united effort

"Organized medicine is able to investigate and expose abuses in the field of health care Many quacks and charlatans have been exposed by the American Medical Association This confers two direct benefits upon every ethical practitioner It protects him from the com-

petition of the unscrupulous, and it protects the profession of medicine from degenerating to a point where the public would insist that government step in to remedy the abuses

"During the past decade the practice of medicine, as it has been known in the past and as we know it, has been threatened by those who would change the practice to a system which has been tried in foreign countries without any great success, and that is the reason I beg of you

to keep our organization strong and ask that each individual cooperate to his utmost because the battle is still before us We have merely won a few minor skirmishes to date and have kept the opposition from completely regimenting the profession

"Never before may the County Society, under the proper leadership, serve as a better influence for good through its public relations committee Let me plead for a solidarity of medical thought and action, for in spite of the fact that each County Society may have its own different problems and difficulties and may be forced to think and act differently on the same problems, the need for a unified profession has never been so important as it is today

"We have reached the point of time when the affairs or course of action of medicine must go on or be modified or terminated This is the decisive mo-

ment—it may be the turning point We are now in a state in which a decisive change one way or the other is impending What are you going to do about it? *It is in your hands!*—Extremely pertinent remarks from an address by David W Thomas, M D , President of the Medical Society of the State of Pennsylvania, on "The Value of Medical Organization "

"If the child and parent can be taught first, the value of good health, second, the need for medical care to conserve good health, the third, how to find and how to secure the medical care he needs, we are engaging upon a long-range health education program which will not only be of greater value to the child when he grows up, but which must in the meantime serve

to educate the parents and the rest of the community"—From the September issue of the *Nassau Medical News* comes this sound suggestion

"For my part I am still unconvinced that the family doctor is an anachronism I still want somebody to save me from unsuitable or excessive specialist advice I need someone to coordinate the findings of specialists and discount them if necessary, and above all I want someone who is willing to talk to me, at length, about my migraine, my little boy's delinquencies, my wife's recent strangeness, my baby's inoculation, and my daughter's desire to marry a man with asthma"—The *Lancet* a short time ago carried this morsel

### Prize Essays

The Merrit H Cash Prize and the Lucien Howe Prize will be open for competition at the next Annual Meeting of the Medical Society of the State of New York, May 6, 1940

The Lucien Howe Prize of \$100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology The author need not be a member of the Medical Society of the State of New York

The Merrit H Cash Prize of \$100 will be given to the author of the best original essay on some medical or surgical subject Competition is limited to the members of the Medical Society of the State of New York, who at the time of the competition are residents of New York State.

The following conditions must be observed

Essays shall be typewritten or printed and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer

If the committee considers that no essay or contribution is worthy of the prize, it will not be awarded

All essays must be presented not later than April 1, 1940, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 2 East 103rd Street, New York City

EUGENE H POOL, M D , *Chairman, Committee on Prize Essays*

### SCIENTIFIC EXHIBIT

Application blanks are now available for space in the Scientific Exhibit at the Annual Meeting at New York City, May 6, 7, 8, 9, 1940 Attention is called to the fact that applications close on January 1 Blanks will be sent on request to Dr William A Krieger, Chairman, Committee on Scientific Exhibits, 103 Hooker Avenue, Poughkeepsie, New York.

# GIANT FOLLICLE LYMPHOBLASTOMA

## A Benign Variety of Lymphosarcoma

GEORGE BAEHR, M D , and PAUL KLEMPERER, M D , New York City

IT IS no longer adequate to use the term lymphosarcoma to describe a malignant growth arising from lymphatic tissue without specifying the type. Of all the malignant neoplasms, those that are of lymphatic origin permit classification into several sharply defined varieties. This classification of the several forms of lymphosarcoma is not based merely upon certain variations in pathologic structure. Clinical recognition of each distinctive type is important because the several varieties present a different course, prognosis, and therapy.

Although lymphosarcoma usually arises either in the lymph nodes or in the lymphatic tissue of the gastrointestinal tract, it may occasionally develop in islands of lymphatic tissue which are to be encountered in almost any organ or tissue. It may at first remain localized to one lymph node or group of lymph nodes, or it may spread rapidly throughout the lymphatic system so that almost all the lymph nodes of the body may be involved more or less uniformly by the time the patient first presents himself to a physician for examination. In some instances it would seem as if the disease began multicentrically in many lymph nodes or simultaneously in all the lymph nodes of the body.

The well-known reticulum cell sarcoma of lymph nodes usually has its origin in one node, although it soon spreads to adjacent lymph nodes. Its characteristic cell type resembles an undifferentiated, rapidly multiplying reticulum cell. The tumor usually grows with extraordinary rapidity so that death may at times occur within six or eight weeks after the onset. The normal structure of an involved lymph node is completely destroyed and

replaced by the uniformly cellular neoplasm which spreads wildly beyond the capsule of the gland into adjacent tissues. The cells are several times larger than lymphocytes, are irregular in shape and commonly present mitotic figures. Aside from the extraordinary rapidity of its clinical course, the reticulum cell sarcoma of lymph nodes is characterized by its relative resistance to x-ray therapy. The prognosis is usually hopeless.

As a contrast to the extremely malignant reticulum cell variety of lymphosarcoma, we now wish to report a benign variety which we have described under the term follicular lymphoblastoma.<sup>1,2</sup> The clinical course of this condition is usually so insidious and prolonged and its clinical picture is so benign that we failed at first to recognize its essential neoplastic character. In its early stages it may present some difficulty in differentiation from simple hyperplasia of lymph nodes. In our first reports of this condition (1925 and 1927) we therefore erroneously termed it "Giant Lymph Follicle Hyperplasia" and "Malignant Lymph Follicle Hyperplasia of Lymph Nodes and Spleen."<sup>3,4</sup> Symmers still holds that this condition begins as a lymph node hyperplasia.<sup>5</sup>

The disease is characterized by a painless swelling of lymph nodes and sometimes of the spleen. The patient usually presents himself for examination because enlarged nodes have been discovered either in one part of the body such as the cervical region or generalized throughout the body. If the lymphadenopathy is generalized, the spleen is found to be enlarged.

There are as a rule no subjective complaints, no weakness, fever, anemia, or



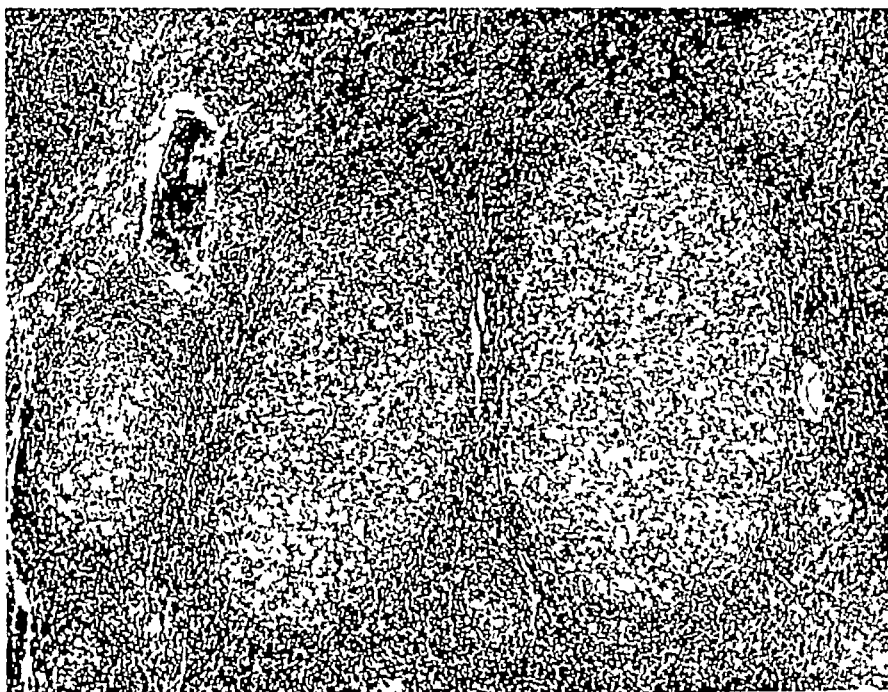


FIG 1 Spleen in case of follicular lymphoblastoma showing huge lymph follicles

cachexia. The blood count is normal. In fact the patient seems to be otherwise entirely well. Lymphatic leukemia is at first suspected but is ruled out by the normal blood and bone-marrow examination. Hodgkin's disease is eliminated by the absence of fever but conclusively only by biopsy and microscopic examination of a lymph node.

The first two illustrations (Figs 1 and 2) are microphotographs of the first case which one of us (G. B.) observed in 1914. The enlargement of the lymph nodes is seen to be due to the presence of an enormous number of huge lymphoid follicles, which are often grossly visible on the cut surface or can be seen with a hand lens.

Microscopically, the lymph nodes are occupied almost wholly by the overgrown lymphoid follicles which crowd one another because of their huge size, so as to compress and obliterate the intervening lymph sinuses. The follicles are at least four or five times the normal size and present the microscopic appearance of enormously enlarged germinal centers.

Upon higher magnification, this appearance is seen to be due to the fact that they are composed of typical lymphoblasts or prelymphoblasts with large, pale-staining, reticulated nuclei, some of which show mitotic figures. The periphery of each follicle is generally clearly outlined by a narrow zone of small, mature lymphocytes with deeply staining nuclei.

In the early stages of the disease when the nodes are still discrete, a careful search of the capsule will usually reveal some tendency to invasion. In the later stages of the disease, sometimes years after the onset, the process may become more malignant and may then spread beyond the confines of the capsule into adjacent structures, and yet the same tendency to form follicles is still preserved.

Enlargement of the spleen is present in most cases, but by no means in all. It may occasionally be so large as to reach to the iliac crest and may weigh more than 1,800 Gm. The cut surface of the organ is striking, for it is thickly studded with large malpighian bodies which



FIG 2 Lymph node showing large follicles and between them the compressed lymphoid tissue

swell up above the cut surface, some as large as barley grains

The giant follicles are much more numerous than in the normal spleen and lie in close proximity to one another. Microscopically, they are even larger than in the lymph nodes and resemble giant germinal centers. Their number proves beyond question that the condition cannot be due to simple hyperplasia but that it represents a new formation of giant follicle-like structures.

Aside from the involvement of lymph nodes, either regionally or generalized, and of the spleen, the tumors may appear in parts of the body which ordinarily contain little lymphoid tissue, such as the fat of the orbit, the lachrymal gland, the breast, the loose connective tissue of the pelvis, and the subcutaneous fat. Nodules of tumor tissue excised from these locations show the same histologic picture of characteristic follicle formation. In one instance, the bone marrow was involved resulting in a pathologic fracture of the femur eleven years after the onset

It is peculiar that thus far we have never observed involvement of the tonsil or of the lymphatic tissue of the gastrointestinal tract.

In many cases with generalized lymphadenopathy some part of the lymphatic system was more conspicuously involved and was responsible for the symptoms which first attracted attention. We have twice observed an exceptionally large mass of retroperitoneal nodes which caused partial pyloric obstruction by compression on the antral part of the stomach. Mediastinal lymph node enlargements may compress the trachea and the great vessels in the superior mediastinum.

A characteristic result of involvement of the mediastinal or abdominal lymph nodes is the occurrence of serous or even chylous effusions in the pleural or peritoneal cavity. This is due to compression of the lymph sinuses of the nodes by the enlarged lymph follicles, thereby interfering with the flow of lymph. Simple removal of the effusion by Potain aspiration or by trocar is always followed

by rapid reaccumulation of the fluid. Recurrence of the effusion is only prevented if the lymphatic swelling in the mediastinum or abdomen is reduced by means of roentgen-ray therapy and the lymph sinuses of the nodes again become permeable to the flow of lymph.

In 6 cases we observed the development of unilateral proptosis some time during the course of the disease. The protrusion of the eyeball was downward and outward. It was apparently caused by involvement of the orbital fat or of the lachrymal gland. In every instance the protruded eye returned to its normal position after a course of roentgen-ray or radium therapy. In one case, proptosis of the opposite eye developed two years after the first, but also subsided after radiotherapy.

*Roentgen-ray Therapy*—Aside from its characteristic pathology and its relatively benign and prolonged clinical course, the most important feature of the disease is its extremely sensitive response to deep roentgen-ray therapy. The results are more prompt and are achieved with far smaller doses than with any other type of neoplasm. The contrast is striking even when compared with other types of lymphosarcoma.

The swollen lymph nodes and spleen usually melt away within a few weeks after a few exposures to 170 international roentgen units (one-fifth of an erythema dose). In spite of this fact, the patients must continue to be examined every few months for the rest of their life, for recurrences are apt to occur, often in lymph nodes distant from the original site, or enlarged nodes may appear in unusual parts of the body where lymphatic tissue is rarely encountered, such as the scalp, the orbit, or the subcutaneous tissue. These recurrences are usually equally susceptible to roentgen-ray therapy. In some instances, the intervals of freedom from recurrences have been as long as six years.

In this manner some patients may contrive to live out their normal span of life and ultimately succumb to another

disease. In other cases, roentgen therapy easily checks the primary process and successfully controls subsequent recurrences for a period of four to fifteen or more years after the onset. Again in other patients the neoplastic process ultimately changes its character, involves retroperitoneal and thoracic lymph nodes extensively and seems to become more malignant and roentgen resistant. Death then ensues as in other forms of lymphosarcoma. Even in these cases the prognosis and the clinical course of the disease is usually benign for the first few years and the condition is readily controllable with roentgen therapy during this period.

In its clinical picture—general lymphadenopathy and splenomegaly without fever, anemia, or cachexia, and in its responsiveness to roentgen therapy or radium—the disease resembles chronic lymphatic leukemia. However, the bone marrow is usually normal and no abnormal leukocytes are found in the blood stream. The differential diagnosis can also be made by the histologic picture of an excised lymph node. This is of special importance because in the terminal stage of the disease we have twice observed a marked increase in leukocytes and the appearance of lymphoblasts in the blood stream. If these two patients had been observed only in this terminal stage, the clinical picture could not have been easily differentiated from chronic lymphatic leukemia. The preceding course of the disease over a period of years with an absolutely normal blood picture and, above all, the characteristic histologic changes in the lymph node left no doubt of the diagnosis. These two experiences suggest that follicular lymphoblastoma may represent a borderline condition between lymphosarcoma and lymphatic leukemia, just as in its early stages the disease may seem to represent a transition between hyperplasia and lymphosarcoma. Our clinical and pathologic studies of a great many cases at various stages of the disease, from onset to autopsy years later, leave us in no doubt that the condition is a variety of lymphosarcoma.

## References

- 1 Baehr Klemperer, and Rosenthal *Am J Pathol* 7 558 (1931)
- 2 Baehr *Trans Assn Amer Phys* 47 330 (1932)
- 3 Brill Baehr and Rosenthal *Jour Am Med Assn* 84 668 (1925)
- 4 Baehr and Rosenthal *Am J Pathol* 3 550 (1927)
- 5 Symmers *Arch Path and Lab Med* 3 816 (1927) and *Arch Path* 26 603 (1938)

## Discussion

Dr John S Lawrence, *Rochester*—This presentation by Drs Baehr and Klemperer has been of particular interest to me. Anything that anyone can do to make diseases of the lymphoma group less confusing is highly desired. They have presented clear-cut findings which will enable us to separate this one rare condition from others that are included under the term lymphosarcoma.

It has been my good fortune to have seen recently a patient with this disorder. This patient, a man 51 years of age, was studied in the metabolism division of the Strong Memorial Hospital from March 4, 1938, to July 15, 1938, by Drs Samuel H Bassett, Nolan L Kaltreider, and Henry Keutmann. The nature of his disorder was not known at this time and the detailed studies which were made on him were carried out as a part of a study on edema, which was his presenting complaint. During this entire period of observation his serum protein values ranged between 3.0 and 3.5 Gm per cent with an A/G ratio of about 2. Restriction of salt and water did, however, cause a loss in weight of 22 kg in about thirty days *without* any change in the total protein values of the blood. There were no abnormal lymph nodes and the spleen was not palpable at this time.

In July, 1938, an exploratory laparotomy was done. Hard, rubbery lymph nodes were found at the root of the mesentery and around the common bile duct. Biopsy of the liver revealed normal tissue. That of a lymph node showed findings of chronic inflammation. Following

operation he was given 1,800 roentgens to 4 ports in the course of ten days. The effective dose was estimated as about 300 roentgens to each area. The serum protein began to rise soon after this and soon reached a normal level with disappearance of the tendency to become edematous.

In December, 1938, he had acute obstructive jaundice. At operation the gallbladder, which five months previously had contained no stones, was found to be filled with small calculi. The obstruction was thought to have been due to glands in the portal area and spontaneously was relieved in three to four weeks. Last month splenomegaly and an enlarged cervical node were noted. The cervical lymph node was removed on April 13, 1939. The findings were typical of those that have been given by Drs Baehr and Klemperer. This patient illustrates the tendency to develop fluid in the body cavities and the ability of the enlarged lymph nodes to cause compression, both of which tendencies have been emphasized by the authors. There is one striking finding, however, which they have not mentioned—the very low serum protein level which was relieved following irradiation. Considerable speculation has arisen as to the explanation for the hypoproteinemia. Loss of protein into the excess fluid in the peritoneal cavity and body tissues is invalidated as an explanation by the maintenance of hypoproteinemia after disappearance of the excess fluid. Some abnormality of the liver resulting in inability to manufacture serum proteins has been suggested but it is hard to see how irradiation could have corrected this. Still another possibility is that blockage of the lymphatic drainage prevented the absorption of some hypothetical substance that is necessary for the production of serum proteins. I hope Dr McCann, who was the first one to see this patient in our clinic, will comment on these findings. In closing, I would like to ask Dr Baehr if he has encountered hypoproteinemia in any of his cases.

## RED-BLOODED YOUNG PEOPLE

A prime fascination of medicine is that it is a never-ending study. Merely not to forget what you have learned cannot keep you ready for the obligations of medicine. Without forgetting anything that you learn in medical school, soon as physicians, surgeons, specialists, etc., you will become hopelessly behind the times, unless you continue to study. Not forgetting will not keep you from rapidly losing out in medicine, what you may know soon is apt to be completely outmoded by new discovery. In your medical

school days, I dare say, this idea of a never-ending study did not seem such a joy. However, how dull a profession medicine would be if, in a few years' study in the medical school, you had learned all that was needed to practice the profession the remainder of your lifetime. That sort of a profession would not attract into it red-blooded young people.

—Christian, Henry A.  
The Lure of Medicine, *Virginia M Monthly* 65 515 (Sept.) 1938

# A CLINICAL STUDY OF HYPNOTICS

## Effect on Gross Sleep Movements, Length of Sleep, Blood Pressure, Respiratory Rate, and Pulse Rate

FRANK MEYERS, M D , Buffalo, EDWARD D COOK, M D , Buffalo,  
and ROBERT C PAGE, M D , Mount Vernon

*(From the Medical Service of the Buffalo General Hospital)*

**T**HE nature of sleep has been studied repeatedly and exhaustively, yet we have only theories as to how this phenomenon occurs. In spite of the comprehensive work in this field which has been performed by Shepard,<sup>1</sup> Kleitman,<sup>2</sup> and Johnson,<sup>3</sup> no uniformity of opinion exists.

The frequent occurrence of insomnia as a symptom has led to the use of hypnotics to a staggering degree. Hambourger,<sup>4</sup> in a recent article on "A Study of the Promiscuous Use of the Barbiturates," reports that 1,219,000,000 grains of barbitol compounds were sold in the United States in the year 1936, a figure which, if broken down, would indicate that 2,200,000 therapeutic doses of these drugs were used daily. Hypnotic habit is rapidly reaching proportions comparable to the cathartic habit. The use of sleep-inducing drugs by the laity without medical supervision becomes an ever-increasing hazard. Hambourger states in his report that "the number of suicides by barbiturates has shown a definite upward trend during the past decade especially marked since 1933."

The family of hypnotics is increasing rapidly, each new member, supposedly, is a more admirable addition. In spite of the large number of hypnotic drugs in use today, very few have been subjected to adequately controlled clinical testing. Up until the present, objective experimental study has been conducted principally on animals. These experiments mainly consisted of the demonstration of the therapeutic index, i.e., the difference between the minimum amount necessary to produce anesthesia

and the minimum amount necessary to produce death. However, anesthesia in animals can hardly be compared to hypnosis in humans, for the reason that hypnosis in animals is very difficult to differentiate from anesthesia. It is first necessary to anesthetize the animal before a hypnotic action may be established. By this token, we are dealing with anesthetic doses of hypnotics in animals and are merely reasoning by analogy as to their hypnotic effect on man.

Sleep is primarily a cerebral function which is difficult at best to measure, but it is accompanied by several phenomena which can be determined accurately. These phenomena are (1) length of sleep, (2) time of onset of sleep, (3) number of gross movements made during sleep, (4) changes in pulse rate, (5) changes in respiratory rate, (6) changes in blood pressure. The influence of therapeutic doses of hypnotics upon these associated phenomena of sleep forms the basis of our study.

### Outline of Experiment

Subjects for these experiments were chosen carefully. Only patients who were free from pain, and those who were not having treatment which might have influenced their sleep were selected for study. None of these patients received opiates or sedatives as part of their daytime treatment. The experiments were conducted in a room segregated from the large public ward in order that the subjects might be protected from noises. The subjects received their usual ward routine care during the day.

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 26, 1939*

From 9 00 P M to 8 00 A M, and longer when necessary, these patients were under constant observation by a nurse who was especially trained for this study. Two beds were used in this experiment, both were attached to actographs.

The device used to record sleep movements in our experiments consisted of a thin brass plate six inches in diameter, placed in the center of the bed under the patient's hips and resting on top of the mattress. This plate was connected by a string and pulley to a writing lever which recorded all the movements of the patients on a kymograph operated by an electric clock. The writing lever was so adjusted that any movement of an arm or leg would be recorded as a gross excursion on the drum. The electric clock was so timed that it took nine hours for the drum to make one complete revolution. Pulse rates were determined by palpation at the wrist, respiratory rates were directly observed and both were recorded at half-hourly intervals, the blood pressure was recorded on a mercury manometer by auscultation at hourly intervals. The subjects slept with a blood pressure cuff on their upper arm, just before the reading was taken the mercury manometer was attached and the cuff gently inflated. Rarely did this awaken the patient. The greatest decrease from the initial level at the onset of sleep which occurred during the night was used in recording our results. The onset of sleep was judged by the observer and recorded. At times it was difficult to estimate exactly when a patient fell asleep. The length of sleep was measured by the number of hours between the onset of sleep and full awakening.

The following drugs were used: a placebo, N-tolyl-butyl-ethyl-barbital, Neonal, a urea derivative,\* sodium pentobarbital, and sodium amytal. Various doses within the therapeutic range were administered. These drugs were chosen because they are of the short-acting type. We avoided drugs which

\* The urea derivative used was unsymmetric ethyl-ethylphenylurea.

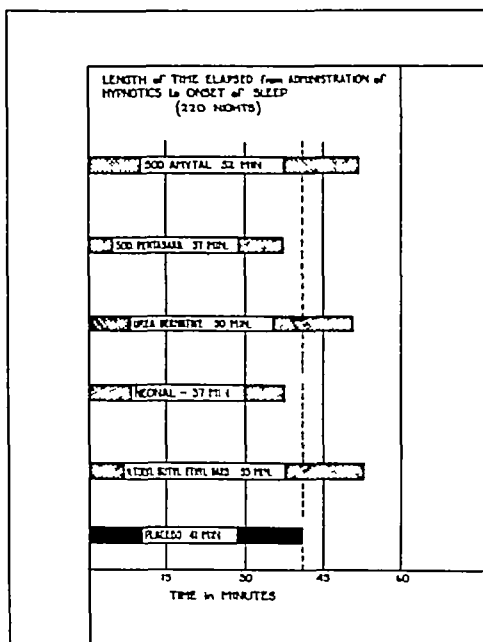


FIG 1

were slowly excreted because of the possibility of a cumulative effect. Each of these drugs was pressed into tablets, all having a similar appearance in order that the subjects would not know what medication they were receiving. We studied 12 patients—a total of 219 nights of observation. Each subject remained in the sleep room for a minimum of fourteen days and a maximum of twenty-six days. The patients received the placebos and the hypnotics in no definite order but each patient received the placebo at least four times during the course of study. We would point out, at this time, that the purpose of this experiment was not a comparative study of the various drugs used, but an observation, of this group as a whole, on the associated phenomena of sleep. It is also a method of clinical approach to the effectiveness of hypnotic drugs.

In the 219 observations on 12 patients given a drug and the time of onset of sleep recorded, it was found that sleep was not induced more rapidly by therapeutic doses of hypnotics. After the placebo, which was administered fifty-

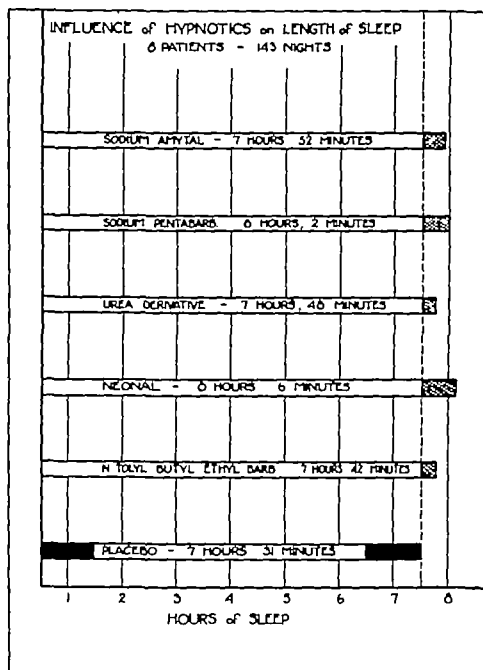


FIG 2

two times in this group, it was found that the average onset of sleep was forty-one minutes after taking the tablet, sodium pentobarbital and Neonal, studied for 25 and 38 nights, respectively, induced sleep four minutes earlier. With the other drugs, the onset of sleep was prolonged by an average of ten minutes.

TABLE A

Drug	Time Elapsed Before Onset of Sleep After Administration (Minutes)	Number of Times Administered
Placebo	41 1	52
Neonal	37 4	38
Sodium pentobarbital	37 4	25
Urea derivative	50 6	47
Sodium amyral	51 7	16
N-tolyl butyl-ethyl barbit	52 9	41

Of the 12 subjects studied, four were individuals with moderate cardiac decompensation. Since the findings in these four varied considerably from the other eight, they were considered separately.

The first group of eight consists of the patients with normal cardiovascular mechanisms—These patients slept slightly longer after hypnotics than they did after the placebo. The largest increase of 32.5

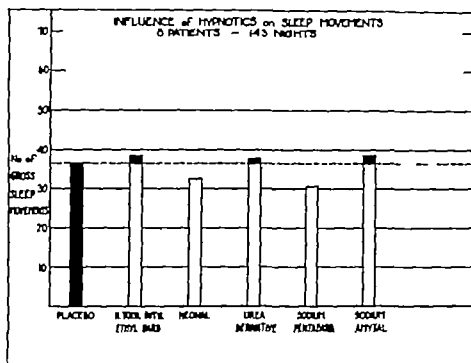


FIG 3

minutes occurred with Neonal, the smallest increase of eleven minutes occurred with N-tolyl-butyl-ethyl-barbital. The length of sleep was not increased to the degree one might reasonably expect following administration of these hypnotics.

TABLE B

Drug	Length of Sleep (Hours) (Minutes)	Increase in Minutes
Placebo	7 31	
Neonal	8 6	32.5
Sodium pentobarbital	8 2	28
Sodium amyral	7 52	21
Urea derivative	7 48	17
N-tolyl butyl-ethyl barbit	7 42	11

These drugs had but slight effect on the sleep pattern or gross movements. On a placebo the entire group averaged 36 movements per night. A decrease of sleep movements was produced by sodium pentobarbital and Neonal, each reducing sleep movements about 10 per cent. The other drugs increased sleep movements.

TABLE C

Drugs	Number of Sleep Movements per Night
Placebo	36 6
Sodium pentobarbital	30 2
Neonal	32 4
Urea derivative	37 2
Sodium amyral	38 2
N-tolyl butyl-ethyl barbit	38 5

Figures 4 and 5 are photographs of actograms on 2 patients, showing extreme individual differences of sleep patterns and how little hypnotics affected them.

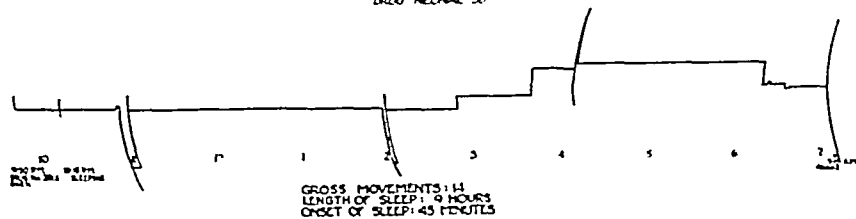
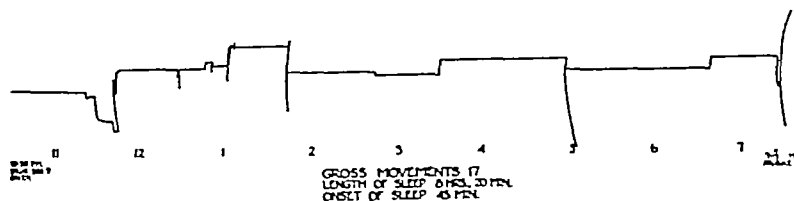
MR. J. A.  
DRUG: NEONAL 30MR. J. A.  
DRUG: PLACEBO

FIG 4

The first actogram shows that this patient was a very quiet sleeper, making few movements during the entire period of sleep. On Neonal he made 14 gross movements, he slept nine hours, and fell asleep forty-five minutes after the drug was administered. This same subject, when a placebo was administered, made 17 gross movements during the night. He slept a total of eight hours and twenty minutes, the onset of sleep being the same as when Neonal was administered.

The second actogram shows the pattern of a patient who was very restless and who made frequent gross movements during the entire night. In the early morning hours just before this patient awakened, gross movements were made so frequently on the slowly revolving drum that many of them superimposed, and we were unable to count them accurately. With sodium amytal, he made 106 gross movements during the night, he slept nine hours and five minutes, and the onset of sleep occurred in thirty

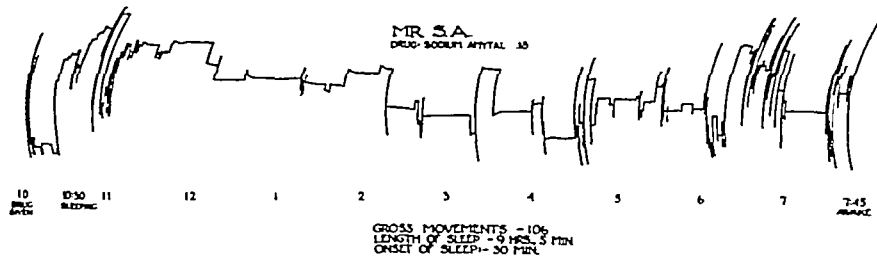
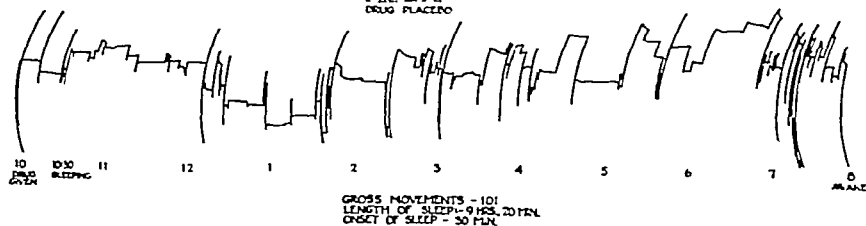
MR. S. A.  
DRUG: SODIUM AMYTAL 30MR. S. A.  
DRUG: PLACEBO

FIG 5



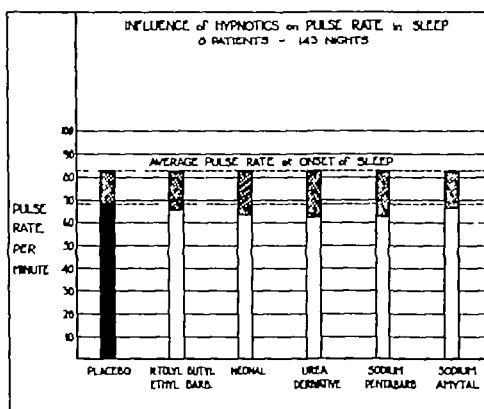


FIG 6

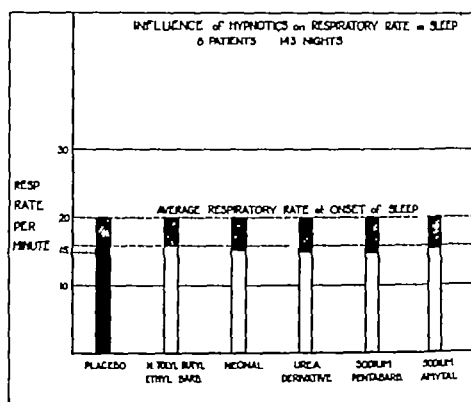


FIG 7

minutes after administration of the drug. The actogram, after a placebo, showed very little deviation from that obtained with the drug. The number of gross movements was 101 during the night, the total time of sleep was nine hours and twenty minutes, and he fell asleep thirty minutes after the administration of the placebo.

**Pulse Rate**—It is accepted that normal sleep is accompanied by a drop in pulse rate. In this group of 8 subjects, the pulse rate at the onset of sleep averaged 83 beats per minute for a period of 143 nights. With the placebo medication the average greatest pulse rate drop was from 83 to 68 beats per minute, with the use of hypnotics a greater reduction in pulse rate was found.

TABLE D

Drug	Greatest Decrease from Initial Rate (No of Beats)	Percentage of Greatest Decrease from Initial Rate
Placebo	15	17.8
Sodium pentobarbital	20	24.3
Urea derivative	19.7	23.8
Neonal	19.3	23.3
N-tolyl-butyl-ethyl barbitol	17	20.5
Sodium amytal	16	19.3

**Respiratory Rate**—Respiratory rate, too, is known to be reduced in sleep. In our group of 8 patients with normal cardiovascular mechanisms, the average respiratory rate at the onset of sleep for 143 nights was 20 per minute. During normal sleep the average maximum fall in respiratory rate was from 20 to 16½.

or 17 per cent. Each of these drugs occasioned a further slight reduction in respiratory rate.

TABLE E

Drug	Greatest Fall from Initial Rate (No per Minute)	Percentage of Greatest Fall
Placebo	3.4	17
Sodium pentobarbital	5	25.2
Urea derivative	4.2	21.1
Neonal	4.1	20.5
Sodium amytal	3.9	19.9
N-tolyl-butyl-ethyl barbitol	3.5	17.5

**Blood Pressure**—All observers agree that there is a fall in both systolic and diastolic blood pressure during sleep of normal and hypertensive people. In our observations, the mean blood pressure of these 8 subjects, at the onset of sleep for a period of 143 nights, was 110 mm systolic and 72 mm diastolic. In normal sleep their average greatest drop in blood pressure was found to be 23 mm systolic and 13 mm diastolic. All

TABLE F

Drug	Average Greatest Fall from Initial Level (in Mm.)	Percentage of Greatest Fall
	23.4 systolic	21.3
	12.7 diastolic	17.2
Placebo	28.9	26.3
Sodium pentobarbital	18.3	25.5
	26.8	24.4
Urea derivative	15.9	22.1
	26.0	23.7
Neonal	16.7	23.3
	25.7	23.4
Sodium amytal	15.6	21.8
	19.9	18.1
N-tolyl-butyl-ethyl barbitol	10.3	14.1

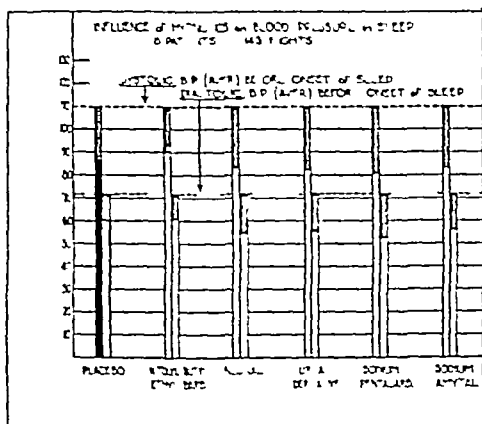


FIG 8

of the hypnotics used, with the exception of N-tolyl-butyl-ethyl-barbital, produced a further fall in blood pressure

### Comment

*Eight Subjects with Normal Cardiovascular Mechanisms*—The hypnotics used produced a slight but consistent reduction in pulse and respiratory rates, and systolic and diastolic blood pressures. The length of sleep was increased by an average of only 21.5 minutes and no effect was produced on the sleep pattern or gross movements.

*The second group consists of 4 patients with moderate congestive heart failure*—In each instance hypnotics increased the length of sleep slightly. On the placebo the average length of sleep was seven hours and fifty-three minutes, the greatest increase of forty minutes occurred with sodium pentobarbital.

TABLE G

Drug	Length of Sleep (Hours) (Minutes)	Increase in Minutes Over Placebo
Placebo	7 53	
Sodium pentobarbital	8 33	40
N tollyl butyl-ethyl-barbital	8 13	20
Neonal	8 10	17
Urea derivative	8 6	13
Sodium amytal	8 3	10

In this group it was found that sleep was accompanied by a greater number of gross movements or marked restlessness

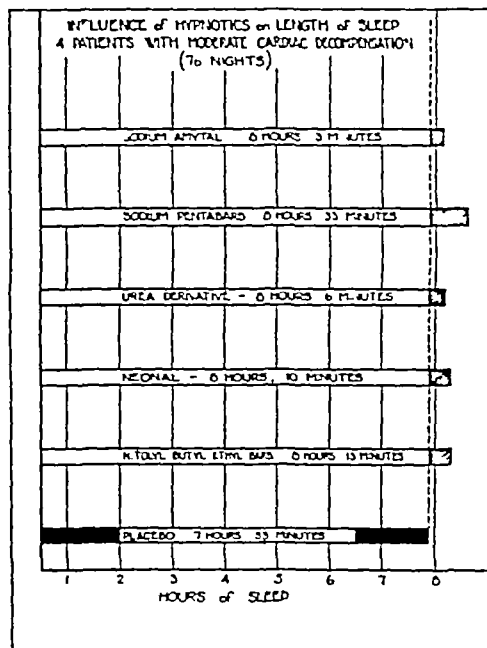


FIG 9

Following a placebo the average number of sleep movements was 54 per night. The subjects in this group averaged 18 more gross movements per night than those of the first group. Only sodium pentobarbital did not effect gross sleep movements, whereas the other hypnotics increased movements appreciably.

TABLE H

Drug	Average No. of Sleep Movements
Placebo	54
Sodium pentobarbital	53
Neonal	58 3
Urea derivative	61 3
Sodium amytal	67 3
N tollyl butyl-ethyl-barbital	68

*Pulse Rate*—The average pulse rate at the onset of sleep for this group, for a period of 76 nights, was 90 beats per minute. Without hypnotics the average greatest drop in pulse rate, was found to be 12.7 beats per minute lower than the initial rate. Slight further depression in the pulse rate was observed in two instances. Sodium pentobarbital and Neonal further depressed the normal drop. Under the influence of the

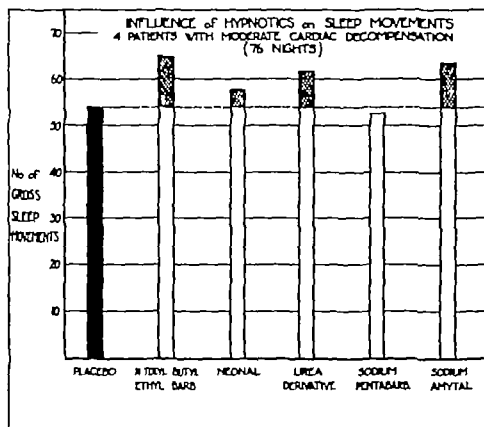


FIG 10

other three drugs, the pulse rate was not diminished beyond the point obtained by the placebo. In each instance, the hypnotics produced a fall of less magnitude than the fall in the normal group.

TABLE I

Drug	Average Greatest Drop from Initial Rate (Beats per Minute)	Average Percentage of Greatest Drop
Placebo	12.7	14.1
Sodium pentobarbital	10.7	18.6
Neonal	14.1	15.7
Urea derivative	12	13.4
Sodium amytal	11.9	13.3
N-tolyl butyl-ethyl-barbital	9.1	10.1

**Respiratory Rate**—In this group of 4 subjects, the respiratory rate for a period of 76 nights averaged 25 per minute at the onset of sleep. The average greatest respiratory rate drop after the administration of a placebo was from 25 to 21.7 per minute or 14.4 per cent. All the drugs, with the exception of N-tolyl-butyl-ethyl-barbital, further increased the fall in respiratory rate.

**Blood Pressure**—In this group the blood pressure changes were not as marked as in the subjects with normal cardiovascular mechanism. The mean blood pressure for 76 nights, at the onset of sleep, was found to be 113 mm systolic and 78 mm diastolic. Without medication, the greatest blood pressure drop averaged 15.2 mm systolic and 11 mm diastolic. There was a further depression

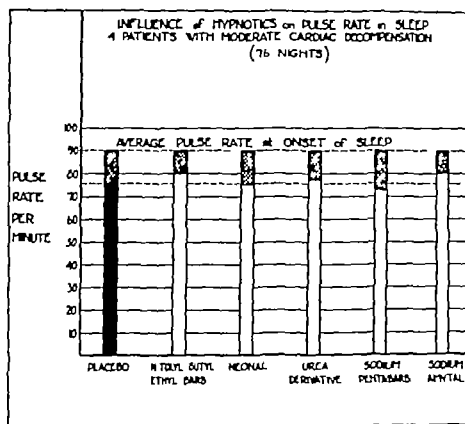


FIG 11

TABLE J

Drug	Average Greatest Fall in Resp. Rate (No. per Min.)	Percentage of Greatest Fall
Placebo	3.6	14.4
Urea derivative	4.7	19.1
Sodium pentobarbital	4.6	18.5
Neonal	4.4	17.9
Sodium amytal	3.5	14.1
N-tolyl butyl-ethyl-barbital	2.9	11.6

in the blood pressure under the influence of each of the drugs studied, the relationship of the systolic and diastolic pressures did not change.

TABLE K

Drug	Average Greatest Drop in Blood Pressure (in Mm.)	Percentage of Greatest Drop
Placebo	15.2 systolic	13.5
	11 diastolic	14
Sodium pentobarbital	21.8	19.9
	19.5	25
Urea derivative	20.5	18.5
	18.2	17
Sodium amytal	18.2	16.5
	30.2	26
N-tolyl butyl ethyl barbital	18.0	16
	13.3	17
Neonal	17.5	15.5
	18.2	17

### Comment

**Four Patients with Moderate Congestive Heart Failure**—These patients were much more restless than those of the first group. Sodium pentobarbital was the only hypnotic which did not increase sleep movements. All the other hypnotics consistently produced a more restless sleep. Sleep following the use of hypnotics in this group was not accompanied by a fall in

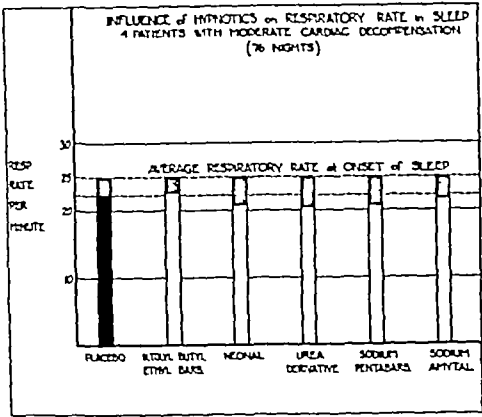


FIG 12

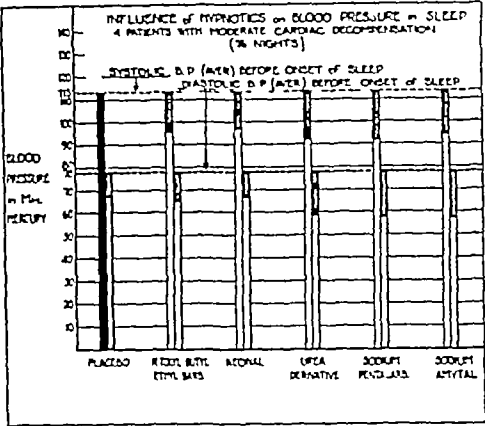


FIG 13

pulse rate which was greater than that following the use of a placebo. Reduction of the respiratory rate and blood pressure was present, but to a less marked degree than in the normal group. Hypnotics in this group increased the length of sleep only twenty minutes. We observed that patients with congestive heart failure became very restless when their blood pressure, pulse rate, and respiratory rate fell after the use of hypnotics. They would move about, cough, turn without waking, and in that way raise their blood pressure and pulse rate. This procedure would be repeated several times throughout the night, never allowing a fall in the blood pressure, pulse rate, and respiratory rate comparable to that of the patients without congestive heart failure.

Summary

By this method of objective clinical testing, we studied the hypnotics, sodium pentobarbital, sodium amytal, Neonal, N-tolyl-butyl-ethyl-barbital, and unsym-metric ethyl-o-ethylphenylurea, and com-

pared their effect on sleep with that of placebos.

We made the following observations:  
The time of onset of sleep was not influenced by these hypnotics.  
The average length of sleep was increased about twenty minutes.  
The sleep pattern, as measured by the number of gross movements made during sleep, was not changed except in patients with congestive heart failure. In these instances the hypnotics increased the number of movements made during sleep.  
The pulse rate, respiratory rate, and blood pressure in subjects with normal cardiovascular mechanisms was consistently depressed by the hypnotics, while patients with congestive heart failure showed very little change.\*

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\* The authors want to thank Burroughs Wellcome & Co. for material and aid furnished for this experiment.

RUMANIA HAS 1,074 CENTENARIANS

There are 1,074 persons over 100 years of age in Rumania, according to figures published in a book by The Central Statistical Institute, the regular Bucharest, Rumania, correspondent of the *Journal of the American Medical Association* reports.

According to the book, the correspondent says, the population of the kingdom this year is 19,-

535,398. Of these, about 60 per cent, that is 15,926,178, live in villages, and the number of the urban population is only 3,609,220.

Since the last census in 1930 the birth rate has fallen from 35.2 per thousand to 31.5 per thousand. The death rate, however, did not follow the rate of decrease of births. It decreased only from 21.2 to 19.8.

## PRESENTING CERTIFIED MILK TO THE PROFESSION

SAMUEL ADAMS COHEN, M D , New York City

*(Member, Milk Commission of the Medical Society of the County of New York)*

**A**LTHOUGH the state of health of an individual is dependent upon many factors, it is plainly evident that the diet or daily food intake is the determining factor. Good nutrition is the key to attaining and maintaining good health.

The history of the medical profession reflects the pioneer work and missionary spirit of its struggles and progress toward sounder and better public health through better food products. An outstanding exemplification of progress is that of the inception and development of certified milk. Since the plan of certified milk was introduced in 1893 by Dr. Henry L. Coit for "clean, safe, pure, wholesome milk, the best which the knowledge of the time could produce," the medical profession has given freely of its time and energy to carry these altruistic and constructive efforts into practical effect. Out of these efforts came the Medical Milk Commission. Today about two-thirds of the states of the country (including every important center), Hawaii, and Canada have Medical Milk Commissions, whose mission (aided by expert personnel) is to direct actively and supervise the production, milking, transportation, and distribution of certified milk.

The members of these Milk Commissions, who are appointed by, and function for, local medical societies, serve without pay. It is their careful and vigilant surveillance that gives its complete assurance that certified milk is superior to all other milk in vitamins, mineral content, and other nutritional elements, as well as in freshness, cleanliness, safety, uniformity, flavor, and protection from contamination.

Unlike many other foods, milk is readily graded by definite and practical yardsticks. Included in these criteria are a determination of the total number of bacteria and of organisms of the Bac-

terium coli group, the nutritive value of the milk (including vitamin content), taste, and butter fat content. Apart from such analysis, routine procedure calls for the checking of veterinary supervision and feeding of the dairy herd, farm inspection, examination of environmental factors that may contribute to the betterment of the milk, periodical examination, and medical supervision of all employees handling milk. Similarly the process of gradation is concerned with milking, handling, transportation, and distribution—including time limit for delivery—as well as with the sanitary conditions under which milk is bottled and the special methods and materials used in capping, sealing, and avoiding contamination. It is the strictest application of these and other criteria that establishes certified milk as superior to all other grades of milk—an assertion that is fully substantiated by an ever-increasing and imposing array of published evidence in the possession of the secretary of every Medical Milk Commission. Hence the unanimous opinion of all authorities on food and nutrition that certified milk should be recommended for those who want the best grade of milk.

So much has been written on the virtues and advantages of milk as a food for the infant, growing child, adolescent, and adult that it would be redundant to discuss here the many details of this almost perfect food. It will suffice to observe that pure milk is practically indispensable in the daily diet of the child for its optimum growth and development and that milk is a valuable aid for better nutrition for the adult. The general nutrition of any community can be fairly well estimated by its daily per capita intake of milk. For children particularly, the nearer the per capita consumption is to a quart of milk daily, the more likelihood

there is that these children will adequately fulfill their all-important requirements of protein and essential mineral salts. Thus, the total intake of milk consumed by the children of any community furnishes a fairly reliable guide to the nutrition and therefore the health of the children in that community. In the light of these facts, the desirability for presentation to the medical profession of data about certified milk is illuminated.

Certified milk was originated by a physician to raise the standards and production of milk. Since Dr. Coit's initial concept, certified milk has been and is today the one and only food product over which the medical profession exercises direct control and supervision. The high idealism embodied in securing a cleaner, safer, and more nutritious grade of milk has been overwhelmingly endorsed and ardently sponsored by the medical profession through the agency of these Medical Milk Commissions. And always, without hurry and without rest, the Medical Milk Commissions, in cooperation with health authorities, Departments of Agriculture, private laboratories, and individual organizations, and with all others interested in better milk for the consumer, have made notable progress from the very beginning of their existence because these groups were always dominated with the spirit to furnish the public with the highest quality milk obtainable. Therefore, the label "Certified" as applied to milk is in reality a far-reaching public health contribution of a Medical Milk Commission.

Ever since 1909 the methods and standards employed in the production of certified milk have been revised from year to year at the annual convention of the American Association of Medical Milk Commissions in accordance with advancing scientific knowledge.

One important result of this voluntary elevation of standards of the production and distribution of certified milk is that it automatically raises the standards of all other grades of milk. The standards of certified milk today will be the standards of other grades of milk tomorrow. In

substance, the acknowledged leadership of certified milk by all the other grades of milk is exemplified by their adoption, later, and by their willingness to accept the standard and pace set by certified milk. It seems evident, therefore, that the more widely certified milk is recommended by the profession, the keener will be the desire and interest of all progressive milk dealers to produce this highest quality of milk in order to meet the increased demand. Furthermore, this growing demand for the best grade of milk by the public will directly or indirectly act as a stimulus for "better grades of milk" to those in the milk industry, who for one reason or another are interested only in conforming to the minimum standards of their local health authorities.

While the medical profession has time and again taken a decided stand and it should now be responsible for the elimination from the market of foodstuffs detrimental to the health and welfare of the community, it has been too prone, unfortunately, to underestimate its power of leadership by not wholeheartedly endorsing the highest qualities of various foodstuffs. Hence the existence and functioning of the Medical Milk Commissions represent the leadership of the medical profession in an unusually happy role.

It has been noted repeatedly that the more conversant physicians are with the superiority of certified milk the more insistent will they become in having their patients use it. Similarly, physicians who recognize the significance of this highest grade of milk will also become increasingly receptive to evaluation of the advantages of other high quality foodstuffs for the improvement of their patients' nutrition and health.

As with other achievements of the profession its increase of public interest in the advantages of certified milk will enhance the profession's direction and influence of leadership in advocating other highest quality foodstuffs. The Medical Milk Commissions automatically obligate themselves to maintain the leadership of certified milk among all grades of milk.

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## SPAS

"Have Spas an Essential Place in the National Economy and How Responsible Is Organized Medicine in Its Efforts to Promote and Control Their Activities?"

JOHN CARROLL, M D , New York City

IN APPROACHING the presentation of this paper before the State Society today I felt, as many of you no doubt do, that in bringing such a problem is like carrying coals to Newcastle. The profession has plenty of problems, some a source of justifiable resentment—problems presented by some of our legislative leaders which are cloaked in a spirit of benevolence that reeks with political expediency, and which are sure to result in injustice and confusion among the classes they propose to serve. Our problems are piling up proportionately almost like the national debt, and like that, too, they must be grappled with and solved. Fortunately there is cause for hope that the solution of the spa problem is a step in conservation rather than dissipation of national wealth.

I cannot see other than an affirmative answer to the first question raised by the title to this paper "Are Spas Essential to the National Economy?" Other nations have long thought so and have increasingly accepted responsibility for the development, protection, and guidance of these enterprises. They have realized through them a quite general use of health-promoting natural resources on the part of their people and a substantial addition annually to the national wealth, including many millions of dollars from America. The European who treasures health and vigor has made the annual cure an essential to his routine of life. The medical profession there has entered actively in the continuation and progress of these curative enterprises. One does not ask the same question about the spas of European countries. They have been and are essential, and as such are nurtured

by an appreciative awareness that includes the whole commonwealth. But the question of whether or not spas are essential to the national economy is one that must be settled as a basis of determination of wherein lies responsibility for their development and regulation. They have existed through several generations, have thrived, and some of them have established a reputation for curative results that compels acknowledgment of a therapeutic value in the agency. Lately, most of them have experienced less patronage and the quality of service has suffered. This development threatens their very existence. The depression years explain a part of the difficult position they occupy, but not all can be so ascribed. Rather in a lack of confidence and support by the medical profession rests the major cause in the conditions now existent. By way of explanation the voice of medicine says that few of the resorts are worthy of their patronage. And this comes from the profession in whom in this country the leading cause of death is degenerative heart disease, causing 40 per cent of their deaths, while among the general population heart disease is responsible for 23.85 per cent of deaths. Heart disease among physicians, including cerebral hemorrhage and arteriosclerosis, increased from a low of 33.73 per cent in 1933 to 40.52 per cent in 1935, a rate five times as great as that of pneumonia, the second ranking cause of death.

The statement that few of the health resorts are worthy of patronage by the profession may well be so, but the need of such service is detailed by Wallace in his paper in the *J.A.M.A.*, August 8, 1936, "The Modern Health Resort."

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 26, 1939*



Therefore, every idea or advancement which carries with it a chance for improving the nutrition, quality, packaging, or distribution serves to strengthen this leadership

In their earliest days, the Medical Milk Commissions were mainly concerned with cleanliness of certified milk. Soon steps were taken by the Commissions to eliminate the danger of disease which might creep into the milk at any stage from the very source of production to its final distribution to the consumer. The Medical Milk Commissions soon discovered that eternal vigilance, fortified by the laboratory, is necessary to assure the consumer of a clean, wholesome, superior grade of milk.

More recently the nutritive quality of milk has been further enhanced, particularly in content of mineral salts and vitamins. Moreover, to secure more uniform quality, the herd producing certified milk is now to be barn fed the year round with a carefully prescribed ration, thereby overcoming the daily and sea-

sonal variation of its milk supply. The quality and quantity of rations for the dairy herd giving certified milk are under meticulous control in order to obtain a milk supply of optimum nutritive ingredients. The preparation of certified milk begins, therefore, with the soil itself.

Even such matters as taste are considered—since the most pleasing taste of milk is always an added incentive to its consumption. Recent research has so improved the taste of certified milk that today its delicate flavor is far superior to that of all other milks.

Again, experiments are now being conducted to produce a milk—certified soft-curd milk—which might be even more readily digestible by infants, children, and adults. Other examples of research in progress today, such as the formulation of methods and standards of certifying goat's milk, further testify that the devotion to the professional ideals and the pioneer spirit upon which certified milk was founded continues today undiminished.

### Annual Registration Due January 1

Every practitioner of medicine and surgery in New York is required by law to apply annually on or before January 1 to the secretary of the board of medical examiners for a certificate of re-registration, on application forms furnished by him, and to pay at that time a fee of \$2. The law authorizes the secretary of the board to permit secretaries of duly incorporated medical societies to act as his representatives, to receive and transmit to him such applications and fees. Practitioners are liable to severe penalties for failing to register and for continuing in practice thereafter.

PETER IRVING, M.D.

*Secretary, Medical Society of the State of New York*

A goodly proportion of these people who make costly excursions to vacation land annually for restoration of vigor and health fail by a large margin to get their moneys' worth and the monetary loss entailed is often the least of the price paid. Cost values of chronic disease to the country are indicated by such studies as Emerson's reported in the *American Heart Journal*, February 1, 1929. He estimated the amount expended in the United States on the care of chronic disease as from \$89,525,000 to \$116,273,000 annually. Dublin's estimates based on 1927 records show that the cost of death from heart disease in 1928 would amount to \$21,960,000,000 in wealth to the commonwealth during the life span. These figures are staggering and in a way incomprehensible, but they do direct attention to a self-liquidating aspect of local, state, and national authority interest in spa resources. Spas in America as in Europe are the pattern upon which an organized attack upon the problem of prevention, care, and rehabilitation of the chronically ill can be effectively approached, and from which should grow the realization of Singer's wish to the medically supervised vacation migration. We need spas for the chronically disabled who have the need and urge to salvage in length of and efficiency of their years of life, and the profession of medicine which has the responsibility and care of these chronically ill and to which they look trustingly for direction, guidance, and care. There are many professional minds with experience in the field who believe that valuable data in aid of treatment of degenerative diseases will be uncovered by such studies as are possible in well-integrated spa regimen.

There is no place to compare with a modern health resort in its advantages in establishing and regulating the diet of the patient. The variety and amounts can be controlled directly through the service channels with little, if any, consciousness on the part of the patient that a dietary regimen is operating. The practice of delivery of order slips to the physician's desk keeps him constantly informed on

varying appetites, eating habits, moods. The individual waitresses become, with little training, sounding posts to the digestive systems of their charges. The relief to the patient in the apparent freedom from restraint and from the mental strain of caloric arithmetic is often noticeably helpful in creating a happier mood. The regular habits of rest and exercise with the mild gymnastics such as the Swedish movements are often sufficient to realize normal elimination. In most American spas little if any emphasis is put upon strong catharsis waters such as characterizes the Carlsbad spa.

Control of and regulation of exercise in the spa regimen is of great importance, and of paramount importance to every individual below par. The variety and amount of exercise in many conditions such as heart disease, vascular states, metabolic diseases, obesity, malnutrition, anemias require as precise definition as drugs and diet. At the modern spa there are trained technicians in passive exercise—the Zander apparatus, the graduated incline, paths, and the more strenuous forms of golf, tennis, and horseback riding. Exercise within the capacity of the heart and body to do easily is the best therapeutic agent known, but the evaluation of the kind and amount often requires an experienced physician's judgment. Rest and repose will allow a patient with embarrassed circulation to realize compensation at basal levels, but restoration of compensation in activity requires skilled management of exercise.

Our plea then is for a searching effort on the part of the medical profession for ways and means in nurturing and supporting spas so that they may function properly in an ethical and creditable way. Criteria in regulation and control when it comes should be by agreement jointly arrived at by cooperative representatives of organized spa personnel with interested and informed members of medical societies. The first need is for the medical profession to become spa minded, the doctor to realize that the development of the modern health resort is as necessary to his future as his aid and sup-

An appraisal of its possibilities is irrefutable and it would seem as if there was a proportionately greater need in our own profession. Chronic disease is rapidly increasing and we are without knowledge of means in prevention, reversal of the change, or arrest. The people realize the growing ravages of involutionary changes, and the impotence of the profession when confronted with results. They are turning to quackery and high-pressure salesmanship for the solution at a staggering cost in money. Chain stores, beauty parlors, drug vendors, proprietary medicine manufacturers are exploiting a harvest that should legitimately go to support the medical profession.

The outcome of the modern trend in medical thought has been that while medicine, established upon a firm scientific foundation, has advanced to an unbelievable degree, the art of medicine has suffered. As Peersal points out, the general practitioner, finding it difficult to keep pace with the rapidly succeeding changes that have taken place in medical practice, has been gradually superseded either by out and out specialists or by a group of clinicians who by reason of their ultra-scientific training have come to look upon patients more as interesting clinical material than as individuals seeking aid for illnesses that are quite as often dependent upon maladjustments in their domestic and social environment as upon objective pathologic changes, and which require for their correction a broad-minded, sympathetic point of view on the part of a medical adviser. The public has become conscious of this fact. The intelligent layman, fully alive to the incalculable blessings that medical progress has bestowed upon him, is equally aware that as medicine has advanced it has become more impersonal and more specialized. Medicine has changed, but the psychology of the patient has not. For the most part they still manifest a desire for personal service much the same as they did in the time of our forefathers, in spite of the advances that have taken place in medicine. They want their doctor to be health adviser. They know

the secret of longevity propounded by Dr. Oliver Wendell Holmes—to have a chronic disease and take care of it. They want to know the ways and means, how to avoid diabetes, kidney diseases, obesity, premature vascular accidents. Preventive medicine is on the lips of the rank and file of people.

Singer, in his paper on medically supervised vacation migrations, points out that the European, whether ill or not, seeks the advice of his physician on the choice of site, and if suffering from a chronic disease he prefers the atmosphere of the health resort with its medically supervised regimen. He contrasts the average American whose conscious motives are a change and a good time with neglect of the chance to improve his health and thereby his real sense of well-being. The great group of Americans who suffer irreparably from this neglect are the chronically ill who are aptly classified by Singer as the real forgotten people of America. Here the medical profession and the country have a large problem, a problem measurable only in billions of dollars when judged from one angle, and hundreds of thousands of discouraged broken individuals, and it ranks first in reasons for the need of the resources of the modern health resort. We know nothing exact about the prevention and arrest of chronic diseases, at least about the underlying involutionary changes, and the changes in the body economy concerned with vigor. With the control of the great epidemic diseases and other advances in preventive medicine the span of life has been steadily increased. The result is that where once the acute infections played a destructive factor, now the degenerative diseases incident to advancing years and the wear and tear of life have become the most important causes of disabling illness. The incidence of morbidity is mounting rapidly. We have no means in our armamentarium to prevent the growing ravages. They develop in the home environment. Hospitalization fails to reverse and arrest the condition and often aggravates it.

that a well-organized spa or health resort should be characterized by

- 1 The presence of natural resources, such as mineral water, peloids (mud or moors), or climate, which have therapeutic value
- 2 Suitable physical facilities for administering the above-mentioned natural therapeutic agents
- 3 Competent medical supervision
- 4 Adequate medical records and facilities for investigation.

In considering these points there is no question regarding the adequacy and variety of natural resources in this country. Mineral waters of all types are found. Peloids, both organic peats and inorganic muds, for therapeutic use are available. Thousands of miles of seashore with both temperate and semitropical climates exist for regulated ocean bathing. Climate resorts both inland at high or low altitudes and on the seashore may be developed.

Suitable physical facilities for the use of these agents differ with the type of natural resource. Some require a large physical plant. The provision of suitable living accommodations is made in some places by the institution, and in others the patients are cared for in hotels or boarding houses in the community.

Medical supervision is of two types. In some places the physician is directly attached to the institution, and in others the physicians in private practice in the community furnish the medical advice. The latter method is practiced in the larger spas. In any case, the treatments should be under the supervision of physicians.

Adequate records are necessary to establish sound clinical information regarding the results obtained from the treatment with the natural modality used. Investigation, both laboratory and clinical, is important to aid the proper evaluation of the results.

The committee also recognized the need for a central controlling council or committee which would not necessarily dictate the exact layout and operation but which would advise the management on proper procedures, assemble information for the medical profession, and promote the study of these valuable natural facilities.

The American Medical Association through its Board of Trustees has just appointed a committee of five men representing widely scattered sections of the country to take up this study and offer concrete suggestions for better utilization of these natural resources, including mineral waters, seaside treatment, peloids, and climate which are of such great value in the maintenance of the health of our people.

Spas have been criticized because the cost of treatments has been prohibitive for the individual of moderate means. In the larger spas, such as Hot Springs, Arkansas, and Saratoga Springs, New York, provision is made for all groups of people. In both places many patients receive treatments without charge after it has been established that they need the treatments and that they are not able to pay the usual fees. Also there are many smaller spas where the cost of treatment is moderate.

The author has stressed the health aspects of a spa. A regular periodic sojourn at a spa offers the finest opportunity for an annual health survey. This is certainly one important factor in the prevention of serious chronic disease, since the discovery of any condition in its early stages offers better opportunity for its control.

The natural agents when properly applied have their place in the treatment of many chronic conditions. They should not be considered as something apart from other methods of treatment. The physician may use them in conjunction with other types of therapy to provide a balanced therapeutic program for many of his patients.

Dr Charles I. Singer, *Long Beach, New York*—A survey of spas and health resorts performed by a committee of the American Congress of Physical Therapy plainly shows that the American spas are in the midst of a vicious circle. The spas, one of our national assets, show a decline in the number of patients. This is due partly to the depression but mainly to lack of medical support in recommending patients for cure. A financial deficit ensues followed up by desperate efforts of the spas to get out of red. They do it by emphasizing the entertainment values of the spa becoming centers of a good time, of recreation instead of re-creation. Secondly, they try to do it by approaching the public above the head of the medical profession with partly unfounded or antiquated claims.\*

The way out of this decline is not an easy one. At its best it will be a hard uphill struggle. But two words in my mind clearly point toward success. These two words are research and education. Research performed in the spas delving into the biologic and patho-biologic effects of spa therapy which is composed of a change of environment, climate, bodily and emotional relaxation, and variegated methods of physical therapy. This research will disclose

\* These unsupported claims and lack of reliable information carrying authority explain the meager interest for the spas shown by the general practitioner.

port are to the future of the enterprise. He should foster patronage by his patients, and join efforts to increase interest of the lay people. The increased cost in overhead to the spa management in meeting the requirements of the ideal pattern will make the adjustment an impossible financial burden unless sustained patronage grows with improved facilities. The doctor must recommend his patients, who will be benefited by such a regimen, to a suitable place and then lend his efforts to making the experience one of benefit and satisfaction to the patient. He must cooperate and advise with the spa physician in planning or adjusting the regimen so as to gain maximum benefit and satisfaction. The member of the profession that must be reached and made aware of the implications of this problem to his responsibility is the general practitioner and this effected by such means of publicity as County Society meetings and medical periodicals. Spa physicians should be invited and encouraged to contribute to medical meetings the report of studies and papers that set forth the advantages of the spa regimen. We should see an end to the timidity or inferiority state that has seemed a part of the spa physician. His timidity has been due no doubt to the fact that he considers himself proxy or for a few weeks the patient's family doctor. But this should not deter him. A follow-up would materially aid a study in results in therapy.

A very appropriate beginning has been realized by the action taken by the American Congress of Physical Therapy meeting at Cincinnati, September, 1937. At this meeting a committee was appointed to assemble data regarding spas and health resorts of the United States. Their report was published in the January *Archives of Physical Therapy*. It is in the field of physical therapy in its broad aspect of hydrotherapy, mechanotherapy, electrotherapy, and climatology, that the foundation of the scientific specialism of the spa physician should be grounded. With this his training should be broad, and he should be trained to appraise the total personality and treat the individual,

not the disease, and be able to teach people how to keep well. The roots of the tree of knowledge for spa physicians should reach back to the first days of the medical college course and his development mature as naturally as the otolaryngologist, dermatologist, the neurosurgeon. In addition to the above basic knowledge the spa physician should have clinical experience that fits him to appraise intelligently the type of case for which the waters are empirically indicated. If the waters are carbonated brine waters and recommended in heart and circulatory disorders the physician in care should be competent in that field. If the spa is of the sulfur variety and advanced as cures for arthritic dyscrasias, the physician should be an authority in this field. Affiliation with the national societies concerned with the study in the class of diseases to which the spa caters by publicity channels should be obligatory, and a system of certification of qualified physicians and systematized record system should be inaugurated by a committee of these societies. The societies in mind are such as the American Congress of Physical Therapy, American Heart Association, American Gastro-Enterological, American Climatological, and American Committee for the Control of Rheumatism. Scientific medicine is necessary to efficiency in the spa regimen—even more so if possible than in the most highly specialized hospital service, and if it is a natural part of the spa physician in his professional social affiliation, the spa easily functions with credit and material success.

## Discussion

Dr Walter S. McClellan, *Saratoga Springs, New York*—I can heartily agree with Dr Carroll's answers to the double question incorporated in his title. Spas have an essential place in our national economy and the medical profession is responsible for their proper development and conduct.

I wish to consider as part of my discussion the "Report on Spas and Health Resorts," made at the Congress of Physical Therapy, and referred to in the paper. The committee in its report (*Arch Phys Ther* 20:42 (Jan) 1939) stated

# EARLY RECOGNITION OF MENTAL DISEASES AND THEIR TREATMENT

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IT IS unnecessary to emphasize to an audience such as this the medical and sociologic importance of mental diseases. You will recall that in the recent hospital number of the *Journal of the American Medical Association*, it was shown that in 1938 there were more than 590,000 beds in nervous and mental hospitals in this country as compared with 425,000 beds in general hospitals. During 1938 nearly 200,000 patients were admitted to these nervous and mental hospitals. In New York State the 66 nervous and mental hospitals available reported approximately 100,000 beds, over 30,000 admissions, and an average census of nearly 91,000. The cost of care of these patients in New York State is over \$35,000,000 a year. It is well known to you that aside from these hospital patients there may be as many more persons in the community suffering from partially or completely incapacitating mental disorders, these disorders causing not only a loss to the individual patients but to society at large. In the time allotted to us we wish to outline briefly some of the early signs of the various groups of mental disorders and to indicate something of their treatment.

First let us consider the mental disorders of the aged. As medical science has brought about a reduction in the mortality in infancy, childhood, and middle life from communicable and infectious diseases, the span of life has been added to so that there is an increasingly large number of elderly persons surviving at any one time in the community. The longer a person lives the greater the chance for developing a mental disorder. Admissions to public hospitals of persons suffering from senile dementias are two

and a half times the proportion of elderly persons of similar age in the general population. I paraphrase the Biblical statement to, "What shall it profit a man if he add ten years to his life and lose his mind?" This situation gives pause for thought but we as physicians do not expect to cease our efforts to prolong life. In the present economic stress these elderly persons have become an increasing burden, particularly in cities. Many elderly people reach a ripe old age and die peacefully in full possession of their faculties. A large number, however, for varying periods before their death, and frequently before the age of 70, begin to show mental disturbances of senility with changes in disposition, an increasing forgetfulness, and an inability to concentrate or to grasp new conceptions. These may be recognized by the physician and the relatives of the patient as normal senescence. However, not infrequently we see apparently keen-minded elderly persons develop ideas of suspicion and persecution directed often against their own relatives and especially their children. They complain to the neighbors and to the police that they are being mistreated, poisoned, and robbed of their money. Because of their apparent keenness these stories are believed by outsiders and result in embarrassment or annoyance to the responsible relatives. The children of such patients frequently become angered at what appear to be willful attempts to bring about trouble and what may formerly have been happy families become families beset with dissension.

The physician has an opportunity here to make clear to the relatives of these old persons their irresponsibility and the

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an array of new scientific facts, will give authority to claims and healthy material for educational propaganda. The American Medical Profession is not at fault in lacking enthusiasm for spas. The spas have to prove that they deserve enthusiasm as they do deserve it. American spas are superior to European health resorts in physical equipment and in the standard

of comfort they offer. If the American spa will surmount the European places in their research and educational program, and I hope it will, it will be due to such stimulating lectures as Dr. Carroll's and to men with good judgment, knowledge, and educational ability like Dr. McClellan, and to the Committee on Spas of the American Medical Association.

## THE QUALITY OF MEDICINE

That was the subject chosen by Dr. Nathan B. Van Etten, president-elect of the A. M. A., for his address at the annual banquet of the Indiana State Medical Association at Fort Wayne on October 11. The problem of choosing the quality of medical care that America is to have faces us today, and Dr. Van Etten asked: "What kind of medicine do you want? Do you want England's Medicine, or Hitler's Medicine, or Stalin's Medicine, or New Zealand's Medicine, or American Medicine?"

"Do you want Socialized Medicine, or State Medicine, or Democratic Medicine? Do you want impersonal medical care or do you want free choice? Do you want bureau medicine or medicine fostered and promoted by those who have been especially dedicated to the service of the sick? Do you want the doctor an employee of the State working limited hours for a salary?"

"Shall we be dominated by dictators or by the needs of the people? The future of medicine will be determined by our citizens. If our citizens are ignorant, the practice of medicine will suffer, if they are informed, American Medicine may go forward. Medicine has survived the rise and fall of many civilizations. I predict that its advances can be only temporarily delayed and that they will attain greater heights long after the actors of the present generation have left the stage."

"You must not take a negative position. Through the influence of systematized adverse

propaganda an impression has been created that the medical profession and especially the American Medical Association is *against* all progress, *against* any change in delivering medical care, and is acting in restraint of those who would try new plans.

"People should be told that these aspersions are untrue, unfairly presented, and they should be told what American medicine really stands for."

"Organized medicine stands *for* the protection of children from all communicable diseases by scientific methods and *for* the care and improvement of deformed or crippled children. *For* the protection of children from accident and injury—*for* the protection of children from blindness. *For* the protection of children from exhaustion of child labor. *For* the care and protection of children from tuberculosis. *For* nutritional improvement. Organized medicine through private practitioners and through hospital practitioners has been steadily improving the growth and health of children for many years."

"Organized medicine stands *for* prevention of communicable venereal diseases. It stands *for* public health—*for* sanitation—*for* good education—*for* good food and drug laws—*for* good housing."

"It stands *for* better education of physicians to implement them for the practice of better medicine."

## "MASSACHUSETTS COMES CLEAN"

At long last the Commonwealth of Massachusetts has taken measures for the protection of its citizens in medical affairs comparable to those of other states, remarks the *J. A. M. A.*, editorially. For years graduates of low-grade medical schools unable to obtain licenses in any other states have flocked to Massachusetts.

Two such schools not recognized in any other state have flourished almost under the shadow of the State House. In theory people were protected by the licensing examination, it is well known, however, that competence to practice medicine cannot be determined by a written examination alone. A written examination might as well be expected to test ability to paint a picture or to shoe a horse. The state has provided no machinery for a practical examination,

which is the only kind of examination worth while in ascertaining fitness for medical practice.

Now, however, by the Acts of April 30, 1936, and May 2, 1938, amending section two of chapter 112 of the General Laws, it has been decreed that no one may enter the licensing examination who is not a graduate of an "approved" medical school. There has also been created an "Approving Authority," which is to determine on request whether any medical school fulfills the requirements formulated and published by it.

The way is now clear to enforce a standard for admission to the practice of medicine at least as high as the standards prevailing generally throughout the United States. After 1941 Massachusetts should cease to be the dumping ground of unqualified practitioners.

tal symptoms described above, with neurologic signs and positive spinal fluid findings, point to a diagnosis of general paresis. As you all know, the treatment of general paresis holds out more hope than it did before the introduction of tryparsamide or fever therapy. In our experience tryparsamide is the best arsenical for the treatment of general paresis. This may be interchanged after a treatment of fourteen or fifteen weeks with a bismuth preparation. If fever therapy is available and the patient's general physical condition warrants it, this should be tried either by the method of malarial inoculation or by the hot-air cabinet. The length of these treatments depends entirely on the individual and his reaction. Fever therapy may well be followed by tryparsamide, the latter should precede malarial treatment when the patient is in a much reduced physical condition.

A mental disorder, frequently in the form of a delirium, may develop during almost any infectious or febrile disease. It appears that certain persons, especially high-strung, unstable types, are more prone to develop deliriums than the more phlegmatic types. These delirious reactions are apt to be worse at night and such patients should always be carefully watched whether in hospitals or in their own homes to prevent them from sudden attempts at suicide. One can never be sure that the delirious patient will not suddenly and impulsively make such an attempt without previous warning. Such protection should be carried out by constant nursing observation rather than by restraint, the latter is apt to provoke increased physical strain by resistance and may enhance exhaustion. Sedative drugs also, we find, are apt to increase the delirium and confusion. Not infrequently we have to treat in mental hospitals drug deliriums that have been brought about by sedative medication during physical illness. The forcing of fluids and the maintenance of an adequate diet with ample vitamins is very definitely indicated in these delirious reactions. Where the mental disorder is essentially of a delirious nature with a febrile reaction the

outlook for recovery depends upon the physical condition. If the patient improves physically the delirious reaction clears up. However, we see not infrequently that infectious disorders, such as influenza, precipitate a more constitutional disorder such as a manic-depressive reaction or dementia praecox and here the prognosis may be independent of the physical disorder, these patients continuing in just as characteristic manic-depressive or dementia praecox reactions as those we see develop without reference to infectious disorder. Varying degrees of a constitutional tendency to dementia praecox combine with varying degrees of febrile reactions to make a variety of clinical pictures that not infrequently are puzzling for prognosis. It is therefore difficult, if not impossible, to make a prognosis of a delirium during a febrile disorder without knowing something of the patient's previous personality characteristics and tendencies. These latter will determine the eventual outcome from a febrile delirium. If a patient has been on the verge of developing dementia praecox the febrile attack may be just enough to tip the balance and more or less permanently upset his adjustment. On the other hand, if a person has had a constitutional tendency to be of a manic type he is more apt to develop a frank manic reaction in association with a febrile delirium and have the usual course and outcome of such a manic reaction. The same applies for depressive persons. The clinical pictures that are not so clear and are more puzzling are seen in those patients who after a febrile disorder continue to show bizarre, sometimes impulsive, erratic behavior with apparently fixed delusions. The prognosis, however, depends much upon the clarity of the sensorium. As long as such post-febrile persons are not clear as to their whereabouts or in their thinking and are unable to concentrate, delusional ideas and erratic behavior do not necessarily by any means indicate a bad prognosis. Some of these patients clear up completely after months of confusion. If, however, patients are clear as to their sensorium



nature of their disorder and to advise tolerance, patience, and disregard of the old persons' complaints. Provision should be made for the conservation of these old persons' resources, if necessary, by the appointment of committees. It is a matter of experience that elderly people are apt to do better with strangers who understand them than they do with their children who still remain youngsters to them and from whom they are not willing to take advice or suggestions. Therefore, often the placing of such a senile paranoid person in a nursing home, or in a home for the aged where he will be associated with a group of his own age, leads to a subsidence of the paranoid ideas and comparative complacency.

Other elderly persons who have previously retained their mental faculties may become acutely delirious and confused and agitated after a minor illness such as bronchitis. These old persons have to be carried through their acute illness with caution. They react badly to sedative drugs and the administration of such drugs may increase the delirium rather than improve it. Further, in such patients the heart action may be weak and may require stimulation particularly if the blood pressure has previously been high. The high blood pressure in an old person may be much more beneficial to him than a low blood pressure, and attempts to reduce the blood pressure in elderly persons may result in a prostration and delirium and exhaustion. If supportive treatment of the heart and circulation and ample fluids and a nutritious diet do not reduce the delirium and confusion and agitation, a sedative such as paraldehyde, which is less toxic than many others, may be used to produce quiet and sleep.

If a middle-aged man who previously has been active and successful in business begins to complain of unusual fatigability and lack of concentration, shows temporary forgetfulness, and has periods of confusion, it is worth while determining what the cause of this may be and what can be done about it. It may be found that he has hypertension with or without

evidence of degenerative arteriosclerosis. The younger he is, or the more marked his hypertension and the more advanced the retinal sclerosis, the poorer the prognosis, and his family should be warned that a rapidly progressive mental enfeeblement may be expected if meanwhile a cerebral shock does not carry him off. In such patients there may not only be mental deterioration but before this occurs, paranoid ideas and suspicion and explosive outbursts of rage or irritability may show themselves. The irritability, we think, is evidence of exasperation which the patient feels as a result of his appreciation of his declining mental ability—a reaction to frustration. Tolerance and patience are essential in caring for these patients. Men of sixty to sixty-five who have developed a degenerative type of arteriosclerosis may show the same clinical mental symptoms. Here the physician can often do much in laying out a plan of living which may prolong the lives of these persons for a fair number of years. A letting-down in work or complete retirement, ample rest, freedom from causes of excitement, a sensible diet, and living in a warm climate may restore these arteriosclerotic men to a comparative mental clarity and a cheerful old age. Here again vigorous attempts at reduction in blood pressure may be detrimental to these patients who have oftentimes reached a certain stage of equilibrium with their comparatively high blood pressure. Extreme dietary restrictions also may be fraught not only with lack of success but with detriment to the patient. A complete upsetting of the bodily mechanisms is not the best treatment of these patients.

The above-mentioned hypothetical man with certain clinical symptoms may have on the other hand an early or moderately advanced general paresis. A negative blood Wassermann will not rule this out. Many syphilitics are treated nowadays to the point of having a negative blood Wassermann. This does not mean that the central nervous system has not been involved and they may go on and develop characteristic general paresis. The men-

young women admitted to psychiatric hospitals illegitimately pregnant because someone who should have been responsible for them had not sensed that they were in an abnormal irresponsible mental state requiring protection

Again, we recall the case of a young man who was looked upon as the most brilliant senior student at a university and was considered an admirable leader because of his many activities, but when he began to tell the president how to run the university and gave speeches to collect a crowd on the campus, it was realized that something needed to be done. As he sensed that something was in the air for him he for a time escaped his friends but eventually returned and came voluntarily to the hospital where he went through a characteristic manic attack with many expansive ideas, particularly with reference to his own power. It was found, also characteristically, that this exuberance was a compensation for a feeling of defeat in that he had not been able to reach a level of athletic activity that his brother previously had acquired in the university. He recovered within a short time and has since done well. He understands himself better now than he did before and there is no necessity or certainty of his having another attack.

On the other hand, not a few young persons become depressed and hopeless at what they sense as defeat. An attempt at suicide, not infrequently successful, may be the first obvious symptom of such a depression, but if one is keenly aware of the possibilities of such reactions in students as well as in older people and if one does not disregard as trivial, evidence of a slowing down and discouragement in such persons but rather gives them opportunity to discuss their difficulties, one may be saving not only lives but prolonged distressed periods of depression. It is still remarkable to us how frequently repeated thoughts and wishes for suicide and even attempts at suicide seem to be disregarded or minimized by families and at times by physicians so that patients are allowed without hindrance to carry out their wishes for death. Perhaps it

would not be so unfortunate if such persons were always those for whom little if anything in the future could be expected but, on the contrary, such depressed suicidal persons are frequently those who may be expected to contribute materially to science and other disciplines if they could be given just that temporary protection and supervision which they need while they are in their depressed phases. If we leave no other thought with you this afternoon I hope that we may have emphasized sufficiently the thought that persons who talk of suicide and particularly those who are depressed and gloomy and discouraged should not be looked upon as merely talking for effect but should be taken seriously, and protected.

It is not always, however, the most depressed and retarded patient who is the greatest suicidal risk but the patient who is coming out of a depression and is being faced with a return to his previous mode of living whatever it may have been. Such a facing of facts is often a severe threat to depressive persons and it is at such times when they seem to be recovering that they should be looked upon particularly as grave suicidal risks. It is only when the depression is completely lifted and there seems to be again some joy or happiness in living with pleasant thoughts for the future that the protection against suicide may be discontinued.

The practitioner of medicine sees dementia praecox reactions before the psychiatrist has them brought to him. They are evidenced frequently in the gradually increasing withdrawal from social and other outside contacts, often with a distorted interest in mystical or philosophical literature which probably is just as incomprehensible to the dementia praecox patient as it is to many of us, but perhaps gives him a sense of kinship because these mystical productions are as vague as some of his own thinking which he realizes is different from the thinking of the other boys and girls or young persons around him. He tries to compensate for this inability to face reality by being different from others. He tries

and appear able to concentrate and do not have dips in the levels of their consciousness, and at the same time maintain the delusional ideas, possibly with hallucinations, the prognosis is not so good, and the chances are that one is dealing with a dementia praecox reaction

It is unnecessary for me to indicate to this audience that mental disorders are not infrequently associated with pregnancy and the puerperium. We used to speak of puerperal psychoses but our recent studies indicate that the puerperium is not associated with any specific characteristic psychosis or mental disorder, but that these stressful periods for women may act as precipitating causes for manic-depressive and dementia praecox and psychoneurotic conditions. Because of the comparative infrequency or absence of puerperal sepsis at the present time, one is not apt to see frequently the delirious reaction of puerperal fever. But women patients who develop manic-depressive or dementia praecox reactions before or after childbirth have to be carefully nursed and observed, especially to see that they do not injure themselves or their children. Suicidal and infanticidal ideas are not infrequently present. Anticipation and recognition of these may save the lives of not a few mothers and children. During these abnormal reactions resentment against the husband or rejection of him completely is not infrequent, particularly if the mother did not want the baby or if she did not want her husband to be the father of her baby, or if she had had doubt of her own maternal ability. These rejections may be quite temporary and the husband should be reassured that they do not mean necessarily a permanently unhappy married life. I think all of us have seen women who in marked manic excitement have cast the most vituperative epithets at their husbands and who upon subsidence of the attack appear again to be affectionate spouses. Attacks such as these with complete loss of inhibition seem at times to act as safety valves for relief of emotional tension and when the pressure is relieved it seems easier to make a

smoother, happier adjustment to marriage

Last Christmas in a department store I was waited upon by a young woman who seemed quite intelligent but who appeared especially exuberant and "fresh" in her conversation. I wondered where the department store had gotten her and how long she would last with them. Two months later she was admitted to our hospital in a frank manic attack. I found that previously she had been through a period of a depression and then had swung into an overactive elated state, at the beginning of which she seemed to make a good impression on people and had many worth-while ideas about business. When the Christmas season was over, however, she became more overactive and insisted on marrying a young man, and when he suggested waiting for a reasonable time this young woman who had been brought up in a very respectable conventional family insisted that she wanted to live with him whether she was married or not. The family felt there was something wrong with her then and were supported in that belief when she began to hear the young man's voice from a distance and maintained that her nurse was an angel exerting a religious influence on her. Such is not an infrequent history that we obtain in young women who have conflicts in making an adjustment to their college activities and classmates or in their love life with young men, and who feel that they are not able to come up to the expectations and standards set by their families. Such young women as well as young men may develop elated excitements with much overactivity and particularly a heightened sexual interest which makes them appear vivacious and attractive but not infrequently leads to embarrassment and catastrophe if they are allowed to continue unhindered in the community. The young woman I mentioned was fortunate in having a stable sensible young man as a love object who had not taken advantage of her. Such a fortunate situation does not always exist, however, and we see too frequently

therapy that we have been accustomed to use

We have had no personal experience with the use of metrazol as we have not used it and have not advocated its use because of the violence of the convulsions it produces. The undue stresses it places on the human organism have been well shown by the dislocation and fractures of bones reported by its users, and more recently there has been demonstrated the comparative frequency with which compression fractures of the vertebrae are found so that in some hospitals, at least, its use has been discontinued.

We do not wish to attempt here an extensive analysis of the comparative results obtained in the treatment of dementia praecox by the use of insulin, metrazol, and other psychiatric procedures. However, we may call attention briefly to some statistics. Malzberg<sup>2</sup> has reported that at the termination of insulin treatment of 1,026 state hospital dementia praecox patients, 13 per cent were recovered. At the end of a year among this same group nearly half of the recovered patients had shown a relapse, but others previously considered improved and even unimproved had reached a condition to be called recovered, so that the total number recovered at the end of a year was practically the same, viz., 12.9 per cent. The catatonic types showed the highest recovery rate, 17.4 per cent.

With 1,140 state hospital dementia praecox patients treated with metrazol the recovery rate reported by Pollock<sup>4</sup> was less than 1 per cent. With the same number of dementia praecox patients in the state hospitals treated with the usual methods there was a recovery rate of 3.5 per cent.

Drewry and I studied the results obtained in 500 dementia praecox patients admitted to the New York Hospital—Westchester Division and treated by the various intensive nonspecific methods available at that hospital. At the time of discharge 7 per cent were recovered.<sup>5</sup> By information obtained subsequently covering periods of time elapsed from slightly less than twelve months for some

cases to over ten years for others, we found that we could report 12 per cent recovered—approximately the same as Malzberg's figures for insulin-treated cases, and that the recovery rate for the catatonic patients had doubled from 10 per cent at discharge to 20 per cent at the time of follow-up—the latter figure being somewhat greater than the recovery rate for catatonic patients reported by Malzberg after the elapse of a year following treatment with insulin.

We cite these figures not as final indications of the results of insulin treatment but to show that dementia praecox patients recover without the use of insulin. The latter, as we have already suggested, may shorten the course and decrease the period of hospitalization. How long the effects last, it is difficult to say. We see rapid relapses in some cases and holding of recovery in others. A second course of insulin treatment helps some and seems to have no effect on others. The treatment must be individualized and, it is perhaps unnecessary to say, should be carried out only in hospitals where any emergency can be met and by physicians who have had experience with the method.

We cannot discuss here adequately or comprehensively the many psychoneurotic reactions and their treatment. We may only make a few remarks which we hope may be pertinent. These persons have often shown their emotional instability and "nervousness," frequently with excessive introspection of their somatic and psychologic functions from childhood or youth. Often they have appeared to be frail reeds, easily tossed from one side to another by what are to them storms of life but which to others more robust would be gentle stimulating breezes. They react excessively to average stimuli through their circulatory, gastrointestinal, and respiratory systems. Many of them have never learned to work toward sensible goals in life. With feelings of inadequacy, probably determined by their inadequate constitutions, they overcompensate and strive eccentrically to reach aims that are beyond their

to build up his own ego and attempts to make a go of life. When the family physician sees a situation such as this we feel it is time to get at the bottom of the disharmony and try to guide these youngsters into what we call sensible thinking and activities. The unfortunate part of it is that such early dementia praecox patients are often looked upon as brilliant students, as having unusually brilliant minds, and are held up as shining examples to the more average but more healthy and balanced youngsters. By the time they are recognized as psychiatric problems they are apt to be so muddled in their thinking and so withdrawn and absorbed in weird fantasies that it is difficult to get in contact with them or to get them straightened up. It is probably because of this unfortunate delay that so many apparently hopeless cases of dementia praecox have previously been admitted to state and other hospitals.

I am not entirely willing to say that one can absolutely prevent the development of a dementia praecox reaction because it obviously is difficult to prove that one has prevented anything when it does not occur. On the other hand, the fact that one has apparently not been able to prevent the development of dementia praecox, as one sees it at a late stage, does not mean necessarily that it might not have been prevented. We see not a few youngsters and adolescents who seem to have the same conflicts and at times strange reactions that are found in those who later are clearly dementia praecox patients. But these other youngsters in some way or other, perhaps with help, work out their problems and their own salvation and go on and live well-balanced lives. We have an idea that the fundamental constitution or make-up of the individual is what determines whether or not he will develop dementia praecox under certain stresses or strains, but on the other hand we have a definite feeling that there are persons who are constitutionally disposed to develop dementia praecox who do not necessarily go on to that development. The development of a frank dementia praecox mental dis-

order may, we feel, be avoided in a predisposed person by the finding for him of a suitable niche where he lives within his capacities and is not forced or pressed beyond them by somebody else, or does not strive to get beyond his capacities because of his own inner dissatisfactions. Such a person may be a dementia praecox personality but he may, because of a combination of circumstances, be able to live out a fairly satisfactory life at what might be considered by some persons a rather low level of adjustment. Dementia praecox is not, as we see it, a disease entity. It is a type of reaction or a form of adjustment attempted by such persons who are unable to meet life as most of us have to and who because of a constitutional deficiency or inadequacy do not develop to a maturity of life. Or, if they have by some chance gotten almost to maturity they slip back quickly and easily to a less mature, often childlike, level of activity where they have little responsibility. If they are unable to find a place in the world where they can get along comfortably with the feeling of security, they develop a psychosis with muddled, panicky, distorted thinking. Persons who develop dementia praecox later in life are those who have been constitutionally more adequate and have reached a higher level of adjustment, but who nevertheless are unable to run a complete and full course of life in competition with others.

I may be expected to say something about the insulin treatment of dementia praecox. My feeling is that it is not a specific cure for dementia praecox but that it shocks certain types of cases into a physiologic or psychologic state where the patients develop either a desire to get away from their previous disordered thinking and behavior or acquire a feeling of dependence and comfort with the physician treating them so that he is able to give them the feeling of security which many of them have been longing for. This method of treatment may bring about beneficial results more quickly than other methods of treatment by occupation and socialization and psycho-

# THE ROLE OF BUROW'S SOLUTION IN DERMATOLOGY

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LOUIS A DUHRING, that master of therapeutics, once said that the successful treatment of skin diseases depends upon a thorough knowledge of the pharmacologic action of the remedy employed. Several years ago I presented before this section a paper on "The Role of Sulfur in Dermatology."<sup>1</sup> The remedy I have chosen for today's discussion does not enjoy so wide a field of usefulness, but nevertheless is an invaluable agent in the relief of many ills of the integument. In the employment of any remedy we should be familiar with its chemotherapeutic action, have a general knowledge of its composition, and know what results to anticipate.

Karl August von Burow,<sup>2</sup> a Prussian surgeon of the nineteenth century, originally suggested the solution which, in a much modified form, we use at present. The preparation was quite astringent, much more than that prescribed in the *National Formulary* of the United States. Von Burow's particular interest lay in ophthalmologic and plastic surgery. The solution was used as a compress in the repair and regeneration of traumatized tissue and as a stimulant to epithelization of epidermal transplants. His original formula and directions for its preparation were as follows:

1	Lead acetate (crystalline)	100 grams
	Distilled water	300 grams
2	Alumen	66 grams
	Sodium sulfate	12 grams
	Distilled water	500 grams

The two solutions should be mixed cold and allowed to stand for two days at a temperature of 10 C, then filter without washing the precipitate.

Since von Burow first suggested the solution which has since borne his name it has undergone many modifications.

Even at the present day its composition varies. I have illustrated the more important changes by enumerating the formulas preferred by various writers.

Billroth	Alumen	5 grams
	Lead acetate	25 grams
	Distilled water	500 cc

Von Zumbusch	Alumen	5 grams
	Lead acetate (basic sol.)	25 grams
	Distilled water	500 cc

Hager's Handbuch der Pharmaceutischen Praxis		
Potassium alum		95 grams
Lead acetate		151 grams
Distilled water		700 cc

The solution was not used very extensively in this country until well after the turn of the century. The Third Edition of the *National Formulary* included a preparation of aluminum subacetate which at that time was in use in Germany and referred to as "Burow's Solution," although it differed materially from the original formula.

Aluminum sulfate	300 grams
Acetic acid	300 grams
Calcium carbonate	130 grams
Distilled water	1,000 cc

This actually produces a 7.5 to 8 per cent solution of basic aluminum acetate. The *National Formulary* never did refer to this preparation as Burow's solution. The first preparation referred to as "Liquor Burowi" was published in the Fourth Edition (1916) as follows:

Lead acetate	150 grams
Aluminum sulfate	85 grams
Distilled water	1,000 cc

This, however, being an imperfectly balanced formula, a change was made in the Sixth Edition, increasing the amount of aluminum sulfate to 87 grams. I will

capacities and become panicky and obsessed with doubts and fears at the threat of failure. Psychoanalysis in the Freudian sense is not the treatment for the larger number of these nervous persons, even if it were practicable to expose them to it. What many psychoneurotics need is education in living, with a program laid out for them of occupation and diversion that lies within their capacities, mental, physical, and financial. The start is made with a careful, painstaking study of the life history, with all the facts available regarding the early impacts of family, friends, schools, and work—an investigation of the ambitions and goals sought, their achievements and frustrations—in short a study of all the possible influences and their effects which have brought the individual as he is to us for help. It is only by so knowing an individual that one can reasonably arrive at conclusions regarding the material we have to deal with and what plan can be made for modifying that material so as to make it a better coordinated organism for fairly successful living. Recognition and acceptance of a limitation in capacity is one of the essentials. From there on it is often possible to work out a plan of activities that is within the limits. Along with this goes an encouragement of the worth-while assets, guided along sensible lines and not according to the previous eccentric muddling. Oftentimes such a treatment of the psychoneurotic may be begun best in a psychiatric hospital where

the atmosphere promotes a feeling of security and where a program of occupation and socialization may be combined with proper psychotherapy and training in living. Here, too, physical studies and treatments may be carried out as indicated for the particular patient.

We have attempted to discuss today some of the aspects of recognized mental disorders. May we leave a final thought, however, that every patient we see has mental or psychologic components which influence his reaction to sickness and may determine the outcome of the disease from which he suffers. The whole psychologic setting in which disease occurs—the patient's conception of what he suffers from, his concern about its effect on his family, his job, and his future, whether he is gaining much or losing much by his illness and whether or not he wishes to get well—all these are of importance to the patient and to the doctor in treating the patient. The sick man may not have a recognized mental illness but he may be mentally sick and he needs all the understanding and help his physician can give him.

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### MEDICAL-DENTAL CONFERENCE

The ninth annual medical-dental convention arranged by the joint committee of the organized medical and dental professions of the city of New York, was held on December 4 at the Hotel Pennsylvania. Presiding officers at the morning and afternoon sessions were Joseph Wrana, M.D., Pres. Queens County Medical Society, George E. Milani, M.D., Pres. Bronx County Medical Society, Clyde H. Schuyler, D.D.S., Pres. First District Dental Society, Howard Fox, M.D., Pres. Medical Society of the County

of New York, Philip I. Nash, M.D., Pres. Kings County Medical Society, and William McGill Burns, D.D.S., Pres. Second District Dental Society. On the program were papers read and discussed by Max J. Futterman, D.D.S., Albert F. R. Andresen, M.D., Clyde H. Schuyler, D.D.S., C. Raymond Wells, D.D.S., Edwin Boros, M.D., Samuel Charles Miller, D.D.S., George H. Dow, D.D.S., Sol Fineman, M.D., Walter A. Coakley, M.D., Robert Heinze, D.D.S., and Samuel Blaustein, D.D.S.

precipitated lead sulfate from the solution

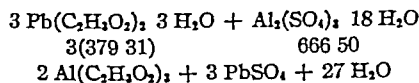
4 According to the current edition of the *National Formulary* Burow's solution is prepared as follows

Lead acetate	150 grams
Aluminum sulfate	87 grams
Water qs ad	
	<hr/> 1,000 cc

Each salt is dissolved in 500 cc of water and mixed cold by pouring the lead acetate solution in a thin stream, with constant stirring, into the aluminum sulfate solution. The mixture is stirred occasionally and then the clear liquid is siphoned off. The magma is then transferred to a filter, and enough water added through the magma to make the filtered mixed liquids measure 1,000 cc. Only the clear solution is dispensed.

On the basis of molecular weights given in the equation below, calculations show that when 150 grams of lead acetate are used, the amount of aluminum sulfate necessary to precipitate all of the lead as lead sulfate is 87.84 grams instead of 87 grams specified. This is an improvement on the 85 grams of the N. F. IV and V, but is still not quite sufficient.

If you use 87 grams of aluminum sulfate, the amount of lead acetate necessary is only 148.55 grams instead of 150 grams specified.



It seems, therefore, that the lead acetate is in excess and would be present in all preparations of finished Burow's solution when made according to the *National Formulary* specification.

An excess of lead acetate, amounting to 1.45 grams (150.00—148.55) is equivalent to 0.079 gram of lead per 100 cc. of solution. This is only slightly higher than the average of solutions A, B, C, and D. I should like to raise the question here as to whether the *National Formulary* procedure should not be revised. It might even be preferable to add an excess of aluminum sulfate to insure the precipitation of all the lead.

## Therapeutics

The usefulness of *Liquor Burowi* has been but slowly appreciated in the United States. Whether this has been due to ignorance of its many virtues or a result of some dissatisfaction with the *National Formulary* preparation, I do not know. Properly dispensed and intelligently used, it has definite beneficial effects upon the inflamed integument. I have enumerated the more important of these as follows:

- 1 Buffer action
- 2 Astringent and antiphlogistic actions
- 3 Antiseptic action

*Buffer Action*—Before considering the chemical processes involved in the buffer action of *Liquor Burowi*, a few words regarding the variations in pH readings of the cutaneous tissues may aid in appreciating its action. Schade, Marchionini, and others<sup>5</sup> have shown that the pH differs in the various layers of the skin. The surface (corneous layer) varies from pH 5 to 3. Pillsbury and Schaffer found slightly higher values. The basal cell layer is but slightly less acid. The cutis vera and subcutaneous tissue approach the pH 7.35 of blood serum. Simple erythematous dermatitis without vesiculation increases the acidity of the epidermis. Erosions, lacerations, and exudative inflammations reduce the acidity of the skin surface. Readings as high as 7.44 have been determined in the eroded skin. The seepage of alkaline serum on the surface is an active factor in the spread of dermatitis due to contact substances both by continuity and contiguity. Resolution of an exudative inflammation and healing of excoriations and lacerations are accompanied by a rapid regeneration of the normal acid reaction in the epidermis. This recuperative process is definitely hastened by compresses of a buffer solution.

When an acid or a base is added to pure water there occurs a rapid dissociation and a sudden change in the hydrogen ion concentration of the solution. A buffer is a substance which will prevent or



show presently that even this amount is not quite sufficient to precipitate all of the lead acetate

The solution is a clear, colorless liquid containing in each 100 cc not less than 4.8 grams and not more than 5.8 grams of aluminum acetate ( $\text{Al}(\text{C}_2\text{H}_3\text{O}_2)_3$ ). It has a faint acetous odor and a sweetish taste. Its specific gravity at 25 C is about 1.022 and its pH varies from 3.7 to 4.5. A sharp distinction exists between the Burow's solution of all European countries and that of the United States. What is referred to here by that name actually has no existence in the pharmacopoeias of Europe, where the solution of aluminum subacetate is in general use. It corresponds roughly to the Liquor Aluminum acetate of the Third Edition of our *National Formulary*, published in 1906.

On numerous occasions it has been observed that Burow's solution has caused irritation, even when used in dilution of 1-10. This led me to inquire whether or not there might be some variation in its preparation and composition which might be responsible for this unexpected and unfavorable reaction. Several samples were collected from various sources and examined for the presence of lead and hydrogen ion concentration, with the following results:

	Lead (Pb) Gm /100 cc	pH
A	0.24	4.05
B	0.013	4.00
C	0.002	3.95
D	Trace	3.70
E	None	4.45

The lead was determined by precipitation as the sulfate. Estimations were also made by the Chromate Method and the Dithiazone Method. All three were checked very closely, although the Dithiazone Method gave slightly higher results. In the pH determinations a glass electrode was used. It will be noted that there was no relationship between the lead content and the pH determinations. Samples A, B, C, and D were all prepared according to the *National For-*

*mulary*. Sample E was prepared from a commercial aluminum acetate powder, 5 grams dissolved in 100 cc of distilled water.

Notwithstanding the fact that distilled water, unless sterile and sealed, will from day to day give variations in pH readings, the difference in the various samples tested was too great to be explained on this basis. Furthermore, these differences were not great enough to account for any irritation. Pillsbury and Schaffer<sup>3</sup> have shown that the unbroken skin will tolerate solutions of pH minus 1, and the abraded skin will react only slightly to solutions of pH 2.

It was considered possible that the free lead acetate might be the responsible factor, because of its marked astringent action, or some idiosyncrasy on the part of the patient. It has been demonstrated by Hammet<sup>4</sup> that lead has an inhibiting action on the local repair and growth of skin by stopping the mytosis through the fixation of the lead by the sulfydryl radicals present in the epiderm. Since sulfur is necessary for the normal development of epidermis, this deprivation would interfere with the recuperative process following inflammation. Four sources for this contamination were considered.

1 According to the *U S Pharmacopoeia*, lead acetate used in the preparation of Liquor Aluminum acetate should contain three molecules of water of crystallization. If the salt has not been kept in tightly sealed containers it will dry, losing so much of this moisture as to upset the formula, resulting in an excess of nonprecipitated lead.

2 Commercial lead acetate contains traces of lead carbonate and sulfate. Its substitution would result in an excess of lead in the finished product.

3 For convenience in dispensing, especially in some clinics, the patient is given a mixture of lead acetate and aluminum sulfate powder. He is instructed to dissolve a teaspoonful in a pint of water for local application. The resulting solution is almost always irritating as no attempt is made to remove the pre-

peated addition of aluminum acetate would result in a concentration on the dressing which might prove irritating. No attempt should be made to cover the dressing with any impervious material such as waxed paper, oiled silk, or rubber tissue as it prevents free evaporation and may result in the retention of heat and maceration of the tissues. The entire dressing should be changed every three hours as the aluminum acetate is gradually destroyed by secretions and inflammatory exudates. Greater relief is often obtained by applying the solution at a temperature between 20 C and 30 C.

Occasionally a flocculent, jelly-like precipitate of aluminum hydrate develops in the solution. It may be clarified by the addition of a little boric acid or borax.

The use of skim milk as a diluent instead of water seems to have certain advantages. Milk itself is a colloid and has been used for centuries as an application in the relief of cutaneous inflammation. Its beneficial qualities may depend upon the phosphates, mainly calcium phosphate and the alkaline salts of potash and soda. Furthermore, milk has definite bacteriostatic properties. Inhibins and mutins have been demonstrated by Dold, Wizemann, and Kleiner,<sup>9</sup> which are capable of inhibiting the growth of bacteria and yeasts. Lehmann<sup>10</sup> has suggested the use of powdered milk with the prepared aluminum acetate powder as follows:

Powdered milk	60 grams
Powdered aluminum acetate	4 grams
Distilled water	500 cc

Aluminum acetate powder can be added to fresh milk up to 2 per cent without precipitating the casein and fats. Such solutions have a pH of 6 and are colloidal in nature.

Wet dressings or poultices are seldom used in dermatologic practice, but are applicable to surgical conditions, lymphangitis, cellulitis, and abscess. On some occasions an entire organ such as a foot or hand may be immersed for several hours in a dilute solution. This is particularly useful in impetiginous dermatitis

and extensive painful ulcerations. A 5 per cent solution is an effective application for the relief of hyperhidrosis.

The prepared aluminum acetate powder is identical with that recommended in the *Deutsches Arznei Buch* No. 6. It has the advantage of constancy of composition, absence of lead, ease of preparation, stability and superiority in therapeutic effect. Its component parts are as follows:

Aluminum sulfate	100 grams
Ac. Acetic dilut	120 grams
Potassium carbonate	46 grams
Water qs	

In conclusion I wish to thank Dr. Charles N. Frey of the Fleischmann Laboratories and Dr. Bernard B. Brodie of the Department of Pharmacology of New York University College of Medicine who have so graciously assisted in the preparation of this paper.

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## Discussion

Dr. Marion B. Sulzberger, New York City—As Dr. Combes has shown in his excellent review, our simplest medicaments are well worth studying—studying from the chemical and physical point of view, from the dispensing point of view, and from the viewpoint of action and properties. No good dermatologist should prescribe a remedy which he has not studied as thoroughly as possible, of which he is ignorant regarding the smell, color, consistency, incompatibilities, difficulties in dispensing, effects, and side-effects.

Some remedies are generally dispensed in so varied a manner that this fact makes it disadvantageous to employ them. For example,

retard this sudden change in the pH value. They are solutions which have a definite hydrogen ion concentration and which are capable of maintaining their hydrogen ion concentration in spite of the addition of appreciable quantities of acids or alkalies. The aluminum acetate of Burow's solution exists in a state of continuous dissociated ionization, and is capable of correcting variations in pH values of the skin.

This buffer action is well illustrated in the following determinations

SOL. ALUMINUM ACETATE 1:10 (pH 4.38)

Mixture	pH of Addition	pH of Mixture
n/10 HCl	1.08	3.12
n/100 HCl	2.02	3.95
n/ Acetic acid	2.36	3.18
n/10 Na <sub>2</sub> CO <sub>3</sub>	11.38	6.37
n/100 NaOH	12.11	4.55
n/10 NaOH	13.07	6.72

Because of this sensitive equilibrium existing between the component molecules, compresses of aluminum acetate solution not only neutralize the alkaline secretions, but as the skin is capable of absorbing acids it also replaces the acids in the epidermis, thereby maintaining the natural defensive mechanism of the integument against pyogenic infection. The degree of acidity of resorcin and boric acid solutions depends upon their concentration. The acidity of aluminum acetate in any dilution is approximately the same and is based upon the buffer substances which enable it to retain a constant acid value. This is of tremendous importance since in all inflammatory dermatoses the buffer action of the tissue is disturbed.

**Antiseptic Action**—Cushny<sup>6</sup> considers Burow's solution as having very definite antiseptic power, "much more so than some of the more generally used antiseptics, such as boric acid." Waterhouse<sup>7</sup> says "for certain surgical purposes aluminum acetate solution is one of the best antiseptics, though it is unknown to most surgeons and practitioners."

I have not pursued any investigation in reference to its bacteriostatic properties *in vitro* since I do not believe this would necessarily indicate its activity on the skin, as contact with cutaneous exudates produces ionic and chemical changes in the solution. It may be said, however, that it tends to maintain an *actual* acidity unfavorable to bacterial proliferation.

**Astringent Action**—It is very definitely astringent. For this reason its use on extensive denuded surfaces is sometimes productive of ill effects. However, Jadasohn<sup>8</sup> has shown that paradoxically a 1 per cent solution will precipitate albumin, whereas a 5 per cent solution will not. This is an interesting phenomenon and is true of many substances which precipitate proteins. On the addition of an excess, the protein is dissolved. A mild astringent effect is of value in cutaneous inflammations accompanied by edema and exudation, both by contracting the blood capillaries and coagulating the albumin in the tissue fluids, thus controlling exudation. As a local astringent in hyperidrosis, the powdered aluminum acetate 20 to 50 per cent mixed with kaolin makes an effective dusting powder.

### Methods of Application

The method of applying Burow's solution is important, as differences in its effect occur in the same way that many other remedies vary in their effect upon the integument when used in various concentrations and vehicles.

There are three common methods of application

1. Wet compresses
2. Wet dressings or poultices
3. Immersion

Wet compresses are indicated in acute inflammations of the skin both of an infective and noninfective nature. Advantage is taken by this method of the antiseptic, antiphlogistic, buffer, and refrigerant properties. A light gauze dressing is applied, moistened with the solution diluted with ten to twenty parts of water. As the dressing dries, distilled water may be added to moisten it. This is preferred to the solution as the re-

# SYPHILIS IN PREGNANCY

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(From the Departments of Dermatology and Syphilology, and of Obstetrics and Gynecology, of the Metropolitan Hospital)

THERE is one form of syphilis which is eminently preventable, namely congenital syphilis. The transmission of syphilis from mother to offspring can be prevented by timely and adequate treatment given to the mother during gestation. In order to accomplish this effectively, it is necessary to know about the interrelationship between syphilis and pregnancy, the fate of the fetus, and the methods and results of treating the syphilitic mother.

This paper presents a review of the literature on the problem of syphilis in pregnancy and also data concerning 194 cases of pregnant syphilitic women. Most of the cases studied (112) were from the Metropolitan Hospital, 82 from the University of Jena Hospital<sup>1</sup> (hitherto unpublished data of the author's Doctor of Medicine dissertation), and 2 cases from the author's private practice. There were 58 cases of early syphilis, 2 cerebrospinal syphilis, 2 congenital syphilis, and 114 of latent syphilis.

*The Reliability of the Serologic Tests in Pregnancy*—It is generally agreed that a strongly positive Wassermann reaction in pregnant women (prevalence from 2.5 per cent<sup>24</sup> to 23 per cent<sup>27</sup>), verified on repetition, is diagnostic of syphilis, regardless of the absence of any history of syphilis. On the other hand, a weakly positive reaction in a patient without a history of syphilis calls for further investigation and for several repetitions of

the test before syphilis can be established or ruled out. Fordyce and Rosen<sup>15</sup> expressed an opinion that a weakly positive reaction with a cholesterinized antigen just before delivery may occur in non-syphilitic women during pregnancy, and is therefore not diagnostic for syphilis. On the other hand, McCord<sup>25</sup> claims that pregnancy does not cause any false positive reactions but it may cause false negative reactions.

Among pregnant women in the Metropolitan dispensary on whom routine Wassermann tests were taken, there were 11 cases in which one or two weakly positive serologic reactions were followed by two to six completely negative serologic reactions, performed at weekly intervals. None of these women gave any history of syphilis, and had not received any anti-syphilitic therapy before or during pregnancy. In those cases in which the results of the deliveries could be ascertained, the babies were perfectly normal and did not show any signs of syphilis (negative cord Wassermann reaction).

The number of patients with nonspecific weakly positive serologic reactions was 5.3 per cent of all pregnant women with positive blood reactions. That figure seems to be larger than the average percentage of nonspecific positive reactions. And because of that, I believe that there is a possibility that pregnancy may be the cause of nonspecific positive serologic reactions. A weakly positive reaction in a pregnant woman, verified and repeated several times, is suggestive of syphilitic infection and calls for antisyphilitic therapy during pregnancy.

*The Influence of Pregnancy on the Syphilitic Process*—Kemp<sup>23</sup> believes that pregnancy produces an inhibiting effect

\* I want to express my deep appreciation to Dr. Fredrick Dearborn, director of department of dermatology and syphilology, Dr. Henry Safford, director of department of gynecology and obstetrics, and Dr. Sprague Carleton, director of department of urology of the Metropolitan Hospital for their permission to study the cases in their respective departments.

I also want to thank Miss Elizabeth Collins and Miss Brigand Connolly for helping me look up records in the hospital and dispensary, and Miss Blanche Tovey for her very fine cooperation in following up cases in the work studied.

lotio alba and calamine lotion "turn out" so differently from druggist to druggist and time to time that I entirely avoid prescribing them in private practice

When I returned from my Swiss and German assistanceships, I soon found that it was impossible to obtain in America the equivalent of the European "Essigsäuretonerde." I also discovered that our "Burow's solution" was often, if not inferior in action to the Essigsäuretonerde, at least much more uncertain and irregular in its effects. I then looked into the matter and found, as Dr Combes has so admirably pointed out, that each edition of the *National Formulary*, and even each druggist and clerk had his own way of making Burow's solution. We should be greatly indebted to Dr Combes for taking the first step toward the eradication of these pharmaceutic evils.

Dr Combes has spoken of irritation from Burow's solution. In the cases of irritation I have observed, the lead was not the cause. My cases were sensitive to the aluminum salts, reacting to aluminum chloride, etc., as well. Skin sensitivity to lead must be very rare indeed, and while it probably exists, I do not recall seeing a case or the report of a case.

If, as Dr Combes suggests, one were to add excess of the aluminum sulfate in order to be sure to precipitate all the lead, one would run the risk of the ill-effects of the excess sulfate. In order to obviate some of these difficulties and in order to have a preparation which is more stable, certain present European Formulaires, for example the Swiss, have now substituted a solution of the double salt, aluminum aceticotartaricum for the older, less stable solution of aluminum aceticum.

## SANITY VS HYSTERIA IN BIRTH CONTROL

Scientific study and reason should replace the hysteria and exaggeration which have accompanied the dissemination and formulation of knowledge of birth control, George W Kosmak, M D, New York, contends in the *Journal of the American Medical Association* for Oct 21.

"Full consideration of the historic, social, economic, legal and medical aspects," he believes, "is necessary to a proper understanding of this complex situation."

"Undoubtedly the medical profession has been hesitant to take an active part in a propaganda with which many of its members are out of sympathy, largely because of the hysteria and exaggeration which have accompanied its dissemination. However, the profession cannot refuse to recognize the firm conviction on the part of the public that procreation can, and perhaps should, be regulated."

"As physicians, we should constitute an active and influential force by which this effort can be guided in the proper direction. There is a sane as well as what may be termed an insane ap-

proach to a question which is agitating a great many people."

In defining the responsibility of the medical profession in birth control Dr Kosmak states:

"Doctors have been looked on as obstructionists to progress in this matter. But we are not obstructionists, we are merely doubters. There has been much sentimental appeal and much loose thinking on this subject and, notwithstanding all that has been said, we are still far from a satisfactory solution of the question of whether conception can be completely or satisfactorily controlled by artificial means."

"In the meantime the physician must play his part and assume his responsibilities. Whether he concludes to limit his participation to the strictly medical indications for contraceptive advice or whether he is ready to acknowledge the desirability of spacing children or limiting their number when this is needed, he should inform himself of the necessary procedures and their proper application and look on this knowledge as a part of his treatment armamentarium."

## SYPHILIS IN THE NEW BORN

"Clinical Digest of Syphilis in the New Born" is the title of the newest pamphlet released for the medical profession by the Bureau of Social Hygiene of the New York City Department of Health. The leaflet is issued in cooperation

with the United States Public Health Service and the New York State Health Department. Copies may be obtained from the Bureau of Social Hygiene, 125 Worth Street, New York City.

TABLE 1—THE INFLUENCE OF THE STAGE AND DURATION OF THE MOTHER'S INFECTION ON THE FATE OF THE OFFSPRING  
(In this table the amount and type of treatment are not taken into consideration)

	Number of Patients	Number of Cases with Early Syphilis	Number of Cases with Late Latent Syphilis	Number of Stillbirths and Children Who Died Soon After Birth
Jena Hospital group	82	56	26	33 (40.2%)
Metrop. Hospital group	95	2	88	16 (16.8%)

each successive pregnancy becomes better as time goes on and the syphilitic infection becomes older

Table 1 illustrates clearly the great number (40.2 per cent) of stillbirths and children who died soon after birth, in the group which was composed mostly of cases of early syphilis.<sup>1</sup> The other group which was composed chiefly of cases of late latent syphilis presented a much smaller percentage of loss of life among the offspring (16.8 per cent)

*Mechanism of the Infection of the Fetus*—Concerning the methods of transmission of syphilis to the child, several opinions are entertained, among which are the paternal and maternal theories. The first one is generally considered to be untenable. The maternal theory is the accepted one, implying that the syphilitic infection is transmitted from the mother to the fetus through the placenta

*Time of Transmission of the Syphilitic Infection to the Fetus*—The fetus is in all probability infected in the latter half of pregnancy, according to Ingraham.<sup>19</sup> Some investigators base their opinion on the fact that syphilitic miscarriages rarely occur before the sixteenth week of pregnancy, but patients known to have syphilis show a much greater incidence of late miscarriages than the nonsyphilitic ones. Among 82 cases (Jena Group) studied by me,<sup>1</sup> none of the miscarriages occurred in the first four months. About 75 per cent of the miscarriages and stillbirths occurred in the six-seven-eight-months period. According to these figures, we may say that syphilis very seldom causes early abortions, but it plays a very important role in the etiology of pre-

mature terminations in late pregnancy. This conception coincides fully with the opinion of Doederlein.<sup>12</sup>

### Treatment of Syphilitic Women During Pregnancy

The main purpose in treating the syphilitic pregnant woman is (1) preventing transmission of the syphilitic infection to the offspring, and (2) the cure of syphilis of the fetus, if the latter is already infected. Because of the importance of these aims, and also because these can be attained only with proper planning and care, the treatment of syphilitic women during pregnancy must be well planned, vigorous, and continuous. If the treatment of the mother is begun early enough, infection of the fetus may be prevented. On the other hand, if the treatment has been delayed and is not started until the second half of pregnancy, such treatment will have to be vigorous enough to be able to combat the spirochetemia in the fetus.

*The Value of Antisyphilitic Therapy in Preventing the Transmission of the Infection to the Offspring*—Statistics and reports of different authors prove that if pregnant women are treated adequately and if treatment is started early enough, their progeny will be normal, nonsyphilitic infants in almost all cases. One hundred per cent of the mothers treated before pregnancy and maintained under treatment without intermission during pregnancy, up to the time of delivery, gave birth to normal nonsyphilitic children.<sup>20</sup> Table 2 illustrates the influence of anti-syphilitic treatment of pregnant women on the fate of the children in our cases. The largest percentage of syphilitic children were born to women who were never treated (90.7 per cent). The smallest percentage of syphilitic children were born to women who were treated before and during pregnancy (31.5 per cent). The treatment during pregnancy is of paramount importance, but even a little and inadequate treatment before pregnancy helps definitely in diminishing the percentage of congenitally syphilitic children.<sup>9, 26</sup> The value of the therapy

upon the course of the syphilitic infection, but at the same time he thinks that there are other factors which are responsible for the changed course of the disease in the female

The lesions of primary or secondary syphilis may be greatly modified or entirely suppressed in cases where the impregnation of the ovum and infection with syphilis approximately coincide<sup>35 27</sup>

The beneficial effect of pregnancy on syphilis lasts not only during the early stage of the disease, but may even last for a long time thereafter. Some authorities go as far as to suggest that pregnancy may be considered a very important factor in the building of the woman's defense mechanism in syphilis. In other words, pregnancy is considered as a valuable therapeutic measure<sup>34, 27</sup>

Because syphilitic manifestations in women are very mild in character, many women are not aware of the infection. In 82 of the patients of the Metropolitan Hospital (86.1 per cent) the syphilitic infection was discovered only by a routine serologic test. These cases suffered from so-called unsuspected syphilis.<sup>3</sup>

*Morbidity of the Mother During Pregnancy and Puerperium*—The morbidity rate in syphilitic pregnant women differs generally very little from that of normal women, but occasionally marked disturbances in the course of pregnancy, delivery, and puerperium may occur. The healing process of the primary and secondary lesions may be markedly prolonged. Because of the fibrosis of the affected tissues, tears of the cervix or perineum may occur. Frequent perineal lacerations have been reported.<sup>12 17</sup> Abnormal presentations, particularly breech, were encountered with greater frequency due probably to the larger number of premature deliveries.<sup>31</sup> The course of pregnancy and puerperium in our cases was normal, with the following exceptions

Among the patients of the Jena Group,<sup>1</sup> there was a case of hydramnion,<sup>34</sup> two cervix tears, two perineal third-degree lacerations, and several minor and vulvar lacerations. In 17 cases a rise of tempera-

ture above 38 C was observed during puerperium. One case, presenting a severe salvarsan dermatitis with crusting, fissuring ulcerations, developed a puerperal infection and sepsis, and died after eight days. Among the cases delivered in Metropolitan Hospital, there were 3 which presented a temperature of 100 F to 101 F for six to twelve days during puerperium, 1 case of hydramnion and a few minor perineal lacerations were observed.

### The Fate of the Offspring

Syphilis is a devastating disease as far as the products of gestation are concerned. About 25,000 fetal deaths from prenatal syphilis occur in the United States.<sup>36</sup>

Cooperative Clinical Group studies of women with latent syphilis have shown that in 78.4 per cent of the cases, the pregnancy ended in a miscarriage or stillbirth, or in the birth of children who died in early infancy, or the birth of congenitally syphilitic children.<sup>27</sup> A syphilitic woman, untreated, bears a healthy child only in one case out of six. The ultimate fate of children born alive is also influenced by the syphilitic infection of the mothers. These children suffer from lowered resistance and malnutrition. They are more susceptible to colds, pneumonias, and other intercurrent diseases,<sup>9</sup> and the mortality and morbidity rates among them are much higher than among children born of nonsyphilitic mothers.<sup>9</sup> Out of 99 women (treated and untreated) delivered in the Metropolitan Hospital, 48 (48.4 per cent) gave birth to syphilitic children, 16 (16.1 per cent) were born dead or died soon after birth.

*The Influence of Duration of the Syphilitic Infection on the Fate of the Offspring*—According to the Cooperative Group,<sup>9</sup> the stage of the mother's infection is of paramount importance with respect to the prognosis of the pregnancy. The effect of the duration of syphilis of the mother on the outcome of pregnancy is discussed also by Paley.<sup>39</sup> The older the infection, the more pronounced is the general weakening of the "virus" even in untreated cases. The prognosis of

TABLE 4 —THE COMPARATIVE VALUE OF NEOARSPHENAMINE AND MAPHARSEN DURING PREGNANCY IN PREVENTING THE TRANSMISSION OF THE SYPHILITIC INFECTION TO THE OFFSPRING

		Patients Treated with Neoarsphenamine	Number of Congenitally Syphilitic Children	Patients Treated with Mapharsen	Number of Congenitally Syphilitic Children
Total number of patients treated	35	22	14 (63.6%)	13	5 (38.4%)
Patients who received less than 5 injections	13	9	7 (77.7%)	4	4 (100%)
Patients who received less than 10 injections	25	18	12 (68.0%)	7	5 (71%)
Patients who received 10 or more injections	10	4	2 (50%)	6	0

syphilitic children born of women who received the same respective number of neoarsphenamine injections. On the other hand, the percentage of congenitally syphilitic babies of all women treated with mapharsen (38.4 per cent) is much smaller than the percentage of congenitally syphilitic babies of all women treated with neoarsphenamine (63.6 per cent).

Women who received ten and more injections of mapharsen gave birth to perfectly normal nonsyphilitic children, while the ones who received the same number of neoarsphenamine injections gave birth to two syphilitic children (out of four). These data, in regard to preventing the transmission of the syphilitic infection to the offspring, show that mapharsen is at least as good and potent a drug as neoarsphenamine. In cases of anemic, undernourished, and weak women, mapharsen, because of its lower toxicity, is preferable to neoarsphenamine.

*The Use of Heavy Metals*—The results of treatment of pregnant syphilitic women, as far as the fate of the offspring is concerned, are much better when heavy metal is given in addition to the arsenicals<sup>24</sup> than when the same amount of arsenical is given alone.<sup>26</sup>

Because the woman is burdened with a double load as far as her excretory organs (liver and kidneys) are concerned, she should not be subjected to the full strain of very intensive treatment, and therefore it is advisable not to use the concurrent method of administration of arsenicals and heavy metal. These drugs are to be given in alternate courses. If the treatment is started as late as the seventh month, however, these two drugs should be given concurrently, once a week each, until delivery.

*Which Pregnant Women Should Receive Antisyphilitic Therapy*—Any preg-

nant woman with a positive serology verified on repetition, or with a history of syphilitic infection in the past, should be treated during pregnancy. It makes no difference whether the infection is of long or short duration, whether the woman was treated previously or not at all. Even if the woman in question has received the proper treatment and was pronounced cured years ago, she should nevertheless be given antisyphilitic therapy during pregnancy. Treatment during a preceding pregnancy is an insufficient protection for the present pregnancy, even if the syphilitic woman has a negative serologic reaction.<sup>9</sup> The syphilitic mother should be treated throughout each pregnancy to insure adequate protection of the offspring. Where the question of Wassermann-negative and physically normal wives of syphilitic husbands is concerned, there is no need to treat them during pregnancy, unless there is some evidence of syphilitic infection in the woman's history. We do contend, however, that these cases should be observed very carefully and serologic examination performed several times during pregnancy.

*The Time to Begin Treatment of Pregnant Women*—The best results are obtained when the treatment is begun before pregnancy and continued without intermission up to the time of delivery (see Table 2). If the diagnosis of syphilis is established only after the woman has conceived, the best possible results are achieved when antisyphilitic therapy is begun in the first half of pregnancy and continued until term. Most investigators agree that if proper and adequate treatment is started before the fifth month, the birth of a normal, nonsyphilitic child is assured in 91 to 95 per cent of the cases.<sup>9, 26, 29, 28</sup> Unfortunately,



TABLE 2—THE VALUE OF ANTISYPHILITIC THERAPY (ESPECIALLY DURING PREGNANCY) IN PREVENTING THE TRANSMISSION OF THE INFECTION TO THE OFFSPRING

	Number	Number of Congenitally Syphilitic Children
Patients who received no treatment at all	11	10 (90.9%)
Patients who received treatment before pregnancy only	5	4 (80%)
Patients who received treatment during pregnancy only	82	13 (40.6%)
Patients who received treatment before and during pregnancy	19	6 (31.5%)

TABLE 3—THE IMPORTANCE OF ARSENOTHERAPY DURING PREGNANCY IN PREVENTING THE TRANSMISSION OF THE SYPHILITIC INFECTION TO THE OFFSPRING

	Number	Number of Congenitally Syphilitic Children
Patients who received less than 5 injections	13	11 (84.6%)
Patients who received less than 10 injections	25	17 (68%)
Patients who received 10 or more injections	10	2 (20%)

depends largely on the number of injections of arsenicals given McKelvey and Turner report that when as much as 4 Gm of arsphenamine (twelve to fourteen injections) have been given, no syphilitic offspring have been observed Other investigators maintain that good results may be achieved with at least ten, preferably fifteen, injections of arsenicals<sup>9 24 36</sup>

The importance of arsenotherapy is illustrated in Table 3 Patients who received less than five injections of an arsenical during pregnancy gave birth to syphilitic children in 84.6 per cent Patients who received ten or more injections of an arsenical gave birth to syphilitic children in only 20 per cent

### Choice of Arsenicals and Discussion on Mapharsen

Some investigators prefer old arsphenamine for the treatment of pregnant syphilitic women, others believe that good results may also be obtained with neoarsphenamine Moore compared the results obtained with arsphenamine with the neoarsphenamine data of Roberts and came to the conclusion that either product given in proper dosage will probably produce equally good results

In a recent article, Ingraham cites 42 cases of fatal arsenical reactions (35 cases collected from the literature) and stresses the advisability of cautious administration of arsenical therapy

Because of the relatively lower toxicity of mapharsen, and its established reputation as a good antisymphilitic remedy, I used it in 24 cases of pregnancy and compared its therapeutic value with that of neoarsphenamine

Although the number of patients treated

and the total number of injections given is too small to formulate definite conclusions, the data obtained may be of interest and worth mentioning Among 24 patients who were treated with mapharsen there were only 6 who developed some kind of a reaction With the exception of a case of pruritus (two to three days' duration) and one of slight vaginal bleeding, which stopped after one hour and was not followed by any further complications (the use of mapharsen was discontinued in this case), all reactions were very mild in character Two patients complained of nausea and vomiting following the injections of mapharsen, 2 others complained of mild nose bleeding which lasted one-half to one hour The reactions in 5 cases occurred only once and did not recur after the dosage of mapharsen was diminished Because of the very small number and mild character of the reactions observed, my findings differ from those of other investigators, Cole and Palmer<sup>8</sup> reported that in 5 of 11 pregnant women treated by them, mapharsen was poorly tolerated, Castallo, *et al.*,<sup>7</sup> state that mapharsen causes distressing gastrointestinal symptoms, with a relative or actual loss in weight They<sup>7</sup> also believe that the protective influence of mapharsen in permitting the gestation to continue appears to be definitely inferior to neoarsphenamine The therapeutic value of mapharsen in comparison with neoarsphenamine, in preventing transmission of the syphilitic infection to the offspring in our cases, is illustrated in Table 4

The percentage of syphilitic children born of women who received less than five and less than ten mapharsen injections is larger than the percentage of

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Patients who received 10 or more injections	10	4	6	0
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		12 (66.6%)		5 (71%)
		2 (50%)		0

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Although the number of patients treated

and the total number of injections given is too small to formulate definite conclusions, the data obtained may be of interest and worth mentioning Among 24 patients who were treated with mapharsen there were only 6 who developed some kind of a reaction With the exception of a case of pruritus (two to three days' duration) and one of slight vaginal bleeding, which stopped after one hour and was not followed by any further complications (the use of mapharsen was discontinued in this case), all reactions were very mild in character Two patients complained of nausea and vomiting following the injections of mapharsen, 2 others complained of mild nose bleeding which lasted one-half to one hour The reactions in 5 cases occurred only once and did not recur after the dosage of mapharsen was diminished Because of the very small number and mild character of the reactions observed, my findings differ from those of other investigators, Cole and Palmer<sup>8</sup> reported that in 5 of 11 pregnant women treated by them, mapharsen was poorly tolerated, Castallo, *et al*,<sup>7</sup> state that mapharsen causes distressing gastrointestinal symptoms, with a relative or actual loss in weight They<sup>7</sup> also believe that the protective influence of mapharsen in permitting the gestation to continue appears to be definitely inferior to neoarsphenamine The therapeutic value of mapharsen in comparison with neoarsphenamine, in preventing transmission of the syphilitic infection to the offspring in our cases, is illustrated in Table 4

The percentage of syphilitic children born of women who received less than five and less than ten mapharsen injections is larger than the percentage of

crepancy (18 per cent) between the cord Wassermann reports and the ultimate status of the infants, and because generally a single Wassermann test cannot be accepted as a proof of infantile syphilis, most investigators<sup>26 27</sup> agree that a positive cord Wassermann test is only suggestive of syphilis and that further serologic study of the infant is indicated in order to establish the diagnosis of syphilis. On the other hand, a negative cord Wassermann test does not exclude prenatal syphilis.<sup>26</sup> It should be supported by further serologic studies. The ultimate fate of 10 of our cases, on which a cord Wassermann test was taken, was followed up. Serologic tests of the blood with or without roentgen examination of the long bones were taken within one to five months after the delivery. The children with a positive cord Wassermann test were proved to be definitely syphilitic while the ones with a negative serology of the cord were found to be free of syphilis. In other words, in our very limited number of cases, the ultimate fate of the children, without exception, corresponded fully with the results of the cord Wassermann test.

(f) *The Blood Serology of the Newborn*—The serology in the first few weeks in early congenital syphilis cannot be relied upon for the diagnosis of syphilis.<sup>14 15</sup> Some infants may be born with a negative serology, which becomes positive after two or three weeks<sup>15</sup>, others may show at birth a weakly positive serologic reaction which becomes negative after one to two weeks (toxemia from the mother).<sup>11</sup> After the first three or four weeks almost 100 per cent of syphilitic infants give a positive reaction of the blood, because of this the most favorable time for the serologic examination of the infant's blood is three or four weeks after birth. It should be repeated after several months.<sup>15</sup>

*Pediatric Follow-up*—Some investigators<sup>30</sup> believe that if by the age of four months the infant has not developed clinical or serologic evidence of syphilis, infection has probably not taken place and the patient may be regarded as non-

TABLE 6—SCHEME FOR TREATMENT OF PREGNANT SYPHILITIC WOMEN

(It is assumed that the infection was discovered in the beginning of the third month)

Week	Arsenical	Bismuth	Method of Administration
1-2		Bism. salicyl 0 1-0 2	Once a week
3-10	Neocaraph 0 3-0 45 or maph 30- 40 mg		Once a week
11-18		Bism. salicyl 0 1-0 2	Once a week
19-27	Neocaraph 0 3-0 45 or maph 30- 40 mg		Once a week

syphilitic. However, I feel that further observation of the infant is necessary, and I agree with Turner,<sup>26</sup> McKelvey,<sup>26</sup> Moore,<sup>27</sup> and Cole<sup>28</sup> that it is safer to examine the child clinically and serologically every six months until it has reached the age of two years. Among the cases in the Metropolitan Hospital I observed 1 which proved to me the necessity of following up observation of the infant for more than four months. One of the patients gave birth to a baby whose cord Wassermann test was four plus. The blood of the infant was examined serologically two months later and was found to be negative. The test was repeated at the age of four and three-fourths months and was found to be strongly positive.

*Children of Syphilitic Mothers Should Not be Treated Before a Definite Diagnosis of Congenital Syphilis Is Established*—Some investigators<sup>28 29</sup> believe that every child of a syphilitic mother, especially if the syphilis is in an early stage,<sup>29</sup> should be treated, even if it does not present any clinical or serologic evidence of the disease. I do not agree with this standpoint and believe that it is unfair to put the stamp of syphilis on an infant and have it undergo the long, strenuous, and sometimes dangerous treatment without definite proof of the presence of the disease. The fact that the mother is suffering from syphilis, in any stage, does not necessarily signify that her offspring is also infected. Quite the contrary, we know of syphilitic families in which some of the children were infected by the mother while others escaped. It is also known

the treatment of pregnant women is often unnecessarily delayed. Several weeks often elapse from the time of the finding of a positive blood test in the prenatal clinic and the patient's appearance in the syphilis clinic. Every pregnant syphilitic woman, however, should be treated, no matter how late in pregnancy the treatment begins. Even a few treatments during the last weeks, constituting a late inadequate therapy, may materially alter the outcome of pregnancy<sup>9, 26</sup> (see Table 2), that the earlier in pregnancy the treatment is begun, the lesser is the number of syphilitic offspring<sup>6</sup> is also illustrated in Table 5. In our series, the percentage of congenitally syphilitic children born to women who began treatment before the fifth month was about one-half that of women who began treatment after the fifth month.

*The Routine Treatment*—Table 6 illustrates the routine treatment of pregnant syphilitic women that is used in the syphilis clinic of the Metropolitan Hospital (service of Dr. Frederick Dearborn). It consists of alternate courses of bismuth and an arsenical (nearsphenamine or mapharsen). It is endeavored to give at least ten bismuth injections and about fifteen injections of arsenicals. In order to avoid Herxheimer's reaction, or violent gastrointestinal disturbances, which may interfere with the normal process of pregnancy, the heavy metal and arsenicals are started with smaller doses. The treatment is planned so that it should end with at least a few arsenicals just before delivery. If treatment is started in the seventh month, the concurrent method of administration of bismuth and arsenical is used.

### Various Diagnostic Measures for the Detection of the Syphilitic Infection of the Offspring

(a) Ingraham<sup>21</sup> performed *darkfield examinations* on fresh preparations of scrapings from the wall of the umbilical vein of infants born of syphilitic mothers and found that method a very useful one for the immediate recognition of the syphilitic infection of the infant. This

TABLE 5 — THE IMPORTANCE OF TREATING THE MOTHER EARLY IN PREGNANCY IN ORDER TO PREVENT TRANSMISSION OF THE INFECTION TO THE OFFSPRING

	Number	Number of Congenitally Syphilitic Children
Pregnant women who began treatment before the 5th month	9	3 (33.3%)
Pregnant women who began treatment after the 5th month	26	16 (61.5%)

method is also recommended by Moore.<sup>28</sup>

(b) A *syphilitic placenta* (thick stroma, small blood vessels, packed with round cells and a marked endarteritis) suggests syphilis of the infant, but not as a final diagnosis, because cases have been reported with a normal placenta and with ultimate syphilitic disease in the infant.<sup>26</sup> A positive serologic reaction of the cord together with syphilitic changes in the placenta proved in 100 per cent the diagnosis of syphilis in the infant.<sup>26</sup>

(c) Fraser<sup>16</sup> believes that *enlargement of the liver and spleen*, fibrotic chronic inflammatory changes in these organs and also in the lungs and pancreas together with chondroepiphysitis of the long bones are the most important pathologic changes in congenital syphilis.

(d) *Roentgenogram of the Long Bones as a Diagnostic Sign*—The characteristic epiphysitis presents thickening and irregularity of the epiphyseal line, which may be replaced later by a zone of fatty degeneration and necrosis between the epiphysis.<sup>16, 34</sup> According to most investigators, the presence of syphilitic epiphysitis, proved by roentgen examination, is almost pathognomonic for the existence of prenatal syphilis, and treatment should be instituted at once.

(e) *The Cord Wassermann Test*—Most investigators believe that the cord Wassermann test is of great value<sup>24, 26</sup> because it points to the possibility of syphilitic infection of the infant. McKelvey and Turner<sup>26</sup> investigated the ultimate fate of infants with a positive Wassermann reaction of the cord and showed that 81 per cent of these were proved to be definitely syphilitic, while 18 per cent were later found to be free of syphilis. Because of the definite dis-

## Discussion

Dr John R. Schermerhorn, *Schenectady, New York*—We believe that the first step in the treatment of any case of syphilis is that the patient should have a very thorough physical examination. Without this, we cannot choose the proper drug nor the dose to use. We also should have the duration of the disease. After these facts are established, we should select the drug to fit the disease. In pregnancy, the majority of patients fall in the young healthy individual group, that is, from 20 to 30 years of age, and these may stand a very vigorous treatment. It is a conceded fact that the drug of choice for the treatment of a young healthy individual is salvarsan, and in our experience over the last two years this fact has been borne out. We believe that salvarsan should also be used in the treatment of the healthy vigorous young pregnant women. Formerly when we used the old gravity method of administering salvarsan, several reactions were noted. In the last two years we have been using a 30-cc. syringe, dissolving the salvarsan in 35 cc. of water with a neutralizing agent coming in a separate bottle for each dose, and giving the injection slowly through a 23-gauge needle. With this method, we have had one slight nitritoid reaction. Two patients who had marked secondary lesions were given a full dose (0.45) of salvarsan and these injections were followed by an elevation of temperature to 104 F and severe chills. These reactions were the only ones that we have had in the last two years through the administering of salvarsan. We now get better results from salvarsan because the dangers of a poorly mixed solution are eliminated by having the neutralizing agent scientifically prepared in individual ampoules for each dose. By this method, a physician may use salvarsan with the same ease that he would use neosalvarsan or mapharsen with not much more trouble in preparing it and with a little more expenditure of time in administering it.

If the patient does not tolerate salvarsan, we then use neosalvarsan or mapharsen, and we agree with the findings of Cole, Palmer, and Costello, and many others, that mapharsen is not tolerated as well as nearsphenamine.

We agree with your conclusions that the earlier treatment is begun, the greater the chances of healthy normal offsprings. In regard to your statement that several weeks elapse from the finding of a positive blood test in the prenatal clinic and the patient's appearance in the syphilitic clinic—this is not a fact in the county of Schenectady. All positive Wassermanns in the county are reported to us coincidently with the

reports sent to the physicians, and our nurses will always follow up these cases either for the private physician or clinic within a few days. The pregnant women are given special attention and not allowed to relapse even one week. This service is extended to both the private physicians and also to our own cases in the clinic. I do not believe that without adequate follow-up facilities the clinic patient can successfully be treated. It is also a great aid to the private physician to be able to take advantage of the follow-up service, and to know that his patients will be returned to him without delay.

To keep these patients under treatment is a distinct advantage to all. By reporting these patients by number instead of by name, secrecy is maintained both as to the mother and the child. This method of reporting is advantageous in that the physician can use this as a lever in compelling the patient to receive continuous treatment without having her name reported for delinquency.

In the State of New York, two laws have been passed during the last year, one making it mandatory that all pregnant women have a Wassermann test done and the other compelling all people contemplating marriage to be examined for syphilis. The passing of these laws will make a great difference in the future treatment of pregnant women because the majority of cases that we will then have will be of comparatively recent infection and will need a very vigorous course of treatment.

Dr Girsch D. Astrachan, *New York City*—(in answer to Dr Schermerhorn)—The reason for the large number of stillbirths and children who died soon after birth in the Jena group of patients, in comparison with the lesser number of deaths among the offspring of the Metropolitan group, lies in the fact that the first group was composed mainly of early syphilitic cases, while the second group presented mostly cases of late latent syphilis. I did not mention the necessity of a complete physical examination of every pregnant woman, because this necessity is self-evident. I admit, however, that a reminder of this need is useful in some cases. I do not see any need for the use of old arsphenamine in cases of pregnancy. The main purpose of treating the pregnant women is not to cure the syphilis of the mother, but to prevent the transmission of the infection from the mother to her offspring. This purpose can be achieved by the use of less toxic drugs than old arsphenamine, namely, nearsphenamine or mapharsen. A pregnant woman, because of the double load on her excretory organs should not be subjected

that one of twins may be born with syphilis, while the other is born normal and remains well throughout life<sup>37</sup> Because of this, I believe that it is much wiser to postpone treatment for weeks or even months, until a definite diagnosis is established, one way or the other

The modern methods of investigation, including cord serologic test, histologic examination of the placenta, darkfield examination of the wall of the umbilical vein, roentgenograms of the long bones, clinical and serologic follow-up, will in the overwhelming majority of cases prove definitely, or disprove entirely, the diagnosis of syphilis

### Conclusions

1 Many women suffer from unsuspected syphilis

2 Routine serologic test should be obligatory in every case of pregnancy

3 The morbidity of the mother during pregnancy may be somewhat increased due to the syphilitic infection

4 An untreated syphilitic woman will have a miscarriage, or a stillbirth, or give birth to a congenital syphilitic child in the largest majority of cases

5 The prognosis of each pregnancy improves as time goes on and the infection of the mother becomes older

6 Congenital syphilis may be completely prevented by adequate and early antisyphilitic treatment of the pregnant woman

7 Every pregnant syphilitic woman should be treated, no matter how old her infection is, and no matter how much treatment she received prior to her pregnancy

8 The best results are achieved when the antisyphilitic treatment is begun before the fifth month and about fifteen injections of arsenicals are given during pregnancy

9 Neoarsphenamine or mapharsen can be used with equal benefits in the treatment of syphilitic pregnant women

10 In cases of anemic, weak, or undernourished women, mapharsen is preferable to neoarsphenamine because it is less toxic

11 The cord serologic test is reliable in most cases, but it should be confirmed by a serologic test of the blood taken three or four weeks after birth, and roentgenograms of the long bones

12 Children of syphilitic mothers should not be treated before the diagnosis of congenital syphilis is definitely established

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# ARSENICAL HEPATITIS

JAMES RALPH SCOTT, M D , New York City

A WHITE man, aged 49, an office worker, slightly overweight, was awakened during the night with a "dull, heavy pain" in the right upper quadrant. The pain did not radiate. It was accompanied by nausea but no vomiting, and after an hour or two settled in the epigastrium. It was relieved slightly by soda bicarbonate in hot water. For the two or three days preceding the attack the patient had felt tired, and the day before the attack had lost his desire for food but had forced himself to eat his usual dinner in the evening.

When seen the morning following the attack, the pulse, temperature, and blood pressure were normal and the physical examination was negative. The following day he complained of a headache. His temperature was then 100.4 F and his pulse 92. Physical examination again was negative. The leukocytes were 10,000, polymorphonuclears 70 per cent, lymphocytes 23 per cent, eosinophiles 2 per cent, and monocytes 5 per cent. The urine was negative except for an excess of indican. Epsom salts and a fluid diet were prescribed, and the following day the patient was well.

One month later a similar attack of pain occurred, followed in three days by anorexia, headache, and a temperature of 101.6 F. The skin and sclera became jaundiced, and the urine bile colored. Stools were somewhat lighter than normal, but not clay colored. There was no diarrhea at any time. Because of the jaundice the urine was tested for arsenic at St. Luke's Hospital. Arsenic was found in large quantities—3 plus. The physical examination, except for the jaundice, was again negative.

The patient was placed on a low fat, high carbohydrate diet, colon irrigations, and forced fluids. The temperature subsided on the second day and the patient was about his work at the end of the

week. The jaundice gradually faded and had disappeared in ten days.

To aid in the elimination of the arsenic, sodium thiosulfate was given intravenously and by mouth. Sulfactol (Metz), containing 1.0 Gm, was given intravenously in 10 cc of distilled water every two days for ten days, then twice weekly for two weeks. During this period, and subsequently for ten weeks, Sulfactol tablets (Metz), 0.5 Gm, was given by mouth three times daily before meals. At the end of seven weeks the urine was tested for arsenic and found to be 1 plus. The test was repeated six weeks later and no arsenic was found. The time elapsed between the discovery of the arsenic and its complete elimination was three months.

Inquiry as to the source of the arsenic resulted in the conclusion that it was ingested with the food, particularly with the fruits and vegetables. A routine Wassermann was negative. The patient had never received any antiluetic treatment, and none of the "tonic" preparations containing arsenic had been administered either hypodermically or by mouth as far back as he could remember. The patient was particularly fond of and ate generous quantities of leafy vegetables, such as lettuce and broccoli, and during the previous six weeks while in the country had consumed two or three apples daily, in addition to his other food.

While the actual food from which the patient's supplies were obtained was not tested, repeated tests both before and since had revealed the presence of arsenic on the fruits and vegetables bought in this vicinity. The source of this arsenic is, of course, the arsenical preparations with which these fruits and vegetables are sprayed. In recent tests performed by the Department of Health of New York City, broccoli and kale were



to the full strain of vigorous antisyphilitic treatment. The latter may aggravate an existing (in some cases) toxemia. The very limited number of cases treated with mapharsen is not sufficient to allow me to formulate any definite con-

clusions. However, I believe that mapharsen in regard to preventing transmission of the syphilitic infection from the mother to the offspring, is as good an antisyphilitic drug as neoarsphenamine.

## LABORATORY AIDS IN THE DIAGNOSIS OF HEMOLYTIC STREPTOCOCCAL INFECTIONS

Hemolytic streptococci are the etiologic incitants of many different infectious processes—scarlet fever, erysipelas, pneumonia, sinusitis, osteomyelitis, septic sore throat, sporadic throat infections. Laboratory examinations may aid the physician by demonstrating the presence of these microorganisms. The majority of hemolytic streptococci from human infections belong to serologic group A. Although these strains can be classified into subgroups according to other biologic characters, an etiologic relationship between the subgroups and the various symptom complexes has not been established. Thus, differential diagnosis must depend upon clinical manifestations.

Bacteriologic studies of cultures from the nose and throat are of limited practical value in the detection of carriers or as a basis for release from quarantine. Hemolytic streptococci are found in specimens from a large percentage of convalescents and also from a small percentage of apparently normal individuals. They may be found intermittently in the noses and throats of carriers who present no other evidences of infection, or they may persist after convalescence in persons to whom no cases of infection are traceable.

Epidemiologic investigations have indicated that in the majority of explosive outbreaks of scarlet fever and septic sore throat a causal relationship can be demonstrated between the cases and raw milk or other food into which the incitants had been introduced by a handler with an active streptococcal infection. In epidemics due to raw milk, hemolytic streptococci from such a handler have usually infected the udder of one or more of the cows (mastitis). The isolation of streptococci of serologic Group A from

the suspected animal, from the food handler, and from representative patients serves to complete the epidemiologic evidence. Prevention of such outbreaks depends upon adequate pasteurization of milk from healthy cows and methods of handling milk and other foods that preclude contamination.

### Laboratory Aids in Diagnosis

*I Nose and Throat Cultures*—When epidemic or streptococcus (septic) sore throat is suspected, the Sanitary Code requires that a culture from the throat on Loeffler's blood-serum medium and the swab used be submitted for examination to a laboratory approved for the purpose. In investigations of any explosive outbreaks of streptococcal infection, similar specimens should be submitted from the noses and throats of all persons having contact with the suspected cattle or food and from representative patients.

*II Exudates*—Bacteriologic examinations of exudates, as from infected wounds, skin lesions, or the ear, aid in determining the incitant.

*III Blood and Spinal Fluid*—Streptococcal septicemia and meningitis may seem to be primary infections, but more frequently they are extensions of a localized process, as in the case of mastoiditis. About 10 cc. of blood or 5 cc. of spinal fluid should be submitted for cultural examination.

*IV Milk*—In investigations of outbreaks, samples from the individual quarters of each cow that has mastitis or lesions on the udder or teats should be examined for Group-A streptococci. These samples, collected under conditions that preclude contamination, may be preserved for shipment by combining 2 parts of milk and 1 part of glycerol, T P.

The New York State Association of Public Health Laboratories

Cancer of the breast has become far more common since it became fashionable for women not to nurse their babies, according to Dr. Frank E. Adair, executive officer of the new Memorial Hospital for the Treatment of Cancer, New York City, as quoted in a newspaper interview.

Early discovery of infection is a game of wits. The tubercle is relentless but without wit. The human race has wit but is indolent. Add to our wit a touch of the relentlessness of our enemy and he has no chance of survival.—Emerson, K, *Jour.-Lancel*

# ANTERIOR POLIOMYELITIS

## Relation to Hypertension in Young Adults

HARRY DAN VICKERS, M D , Little Falls, New York

**R**ECENTLY in the course of private practice, there came to my attention, in quick succession, a series of three cases in which arterial hypertension of moderate degree was associated with the stigmata of anterior poliomyelitis. The patients were all young adults, and in each instance other pathologic findings of significance were absent.

### Case Reports

*Case 1*—Mr. A. B., aged 28, stated that he had been refused a life insurance policy because of high blood pressure. He had had anterior poliomyelitis at the age of 14, but no permanent paralysis resulted. He had had influenza at the age of 25. He suffered from occasional colds and was subject to attacks of hay fever. His only complaint was slight pounding of the heart on exertion. He was of asthenic physique and definitely nervous constitution. Physical examination revealed some prolongation of the first sound at the apex of the heart. The blood pressure was 180/120. Routine urinalysis was negative and a Mosenthal kidney function test gave normal results. The red cell count, white cell count, and hemoglobin were within normal limits. A six-foot roentgenogram of the chest showed nothing of note. The basal metabolic rate was minus 2½ per cent. The electrocardiographic tracings were not remarkable. The blood Wassermann was negative. Subsequent blood pressure determinations have been 172/114, 154/114, 170/114, and 180/120. These readings have been spaced about six months apart.

*Case 2*—Mr. L. C., aged 25, also stated that he had been refused a life insurance policy because of high blood pressure. He recalled no illnesses other than an attack of anterior poliomyelitis which occurred at the age of three years and which had left him with atrophy of the muscles of the left leg and weakness of the muscles of the left lumbar region of the back. There were no other physical findings of note. His blood pressure was 176/106. Routine urinalysis was negative and a Mosenthal kidney function test gave normal results. The red cell count, white cell count, and hemoglobin were

within normal limits. Blood Wassermann was negative. The basal metabolic rate was plus 10 per cent on one occasion and plus 7 per cent on another occasion. The electrocardiogram was not remarkable. Subsequent blood pressure determinations have been 176/110, 205/100, and 190/120.

*Case 3*—Mr. G. E., aged 31, came in my office to discuss the illness of his brother, and, before leaving, casually inquired about the possible causes of a pressure sensation in his chest. His blood pressure was found to be 160/85. Inquiry revealed that he had had anterior poliomyelitis at the age of 8 years and had suffered a temporary paralysis of both legs. He had had measles at 3 years of age and mumps at 12. A few carious teeth and chronically diseased tonsils were the only pathologic physical findings. Routine urinalysis was not remarkable. The blood Wassermann was negative. The electrocardiogram was normal in appearance. Subsequent blood pressure readings were 140/85 and 150/78.

Since these three cases were seen in a very short interval of time, I was impressed by the fact that all had had infantile paralysis. A cursory search of the literature failed to reveal any mention of such an association. Blood pressure readings were obtained on a few acquaintances who were known to have had polio in their childhood and all were elevated. With the backing of this additional evidence it was decided to obtain blood pressure readings on as many cases as possible. To this end the New York State Department of Health furnished a list of poliomyelitis victims in this vicinity. This list covered cases back to 1916. These people were seen, a brief history obtained, and their blood pressures recorded. An aneroid sphygmomanometer was used. Most of them were revisited to obtain check readings, on a mercurial sphygmomanometer. I was impressed by the fact that most showed no outward sign of ever having

found to be particular offenders. The involvement of these vegetables and fruits is not a plea for eliminating them from our diet. To most persons the small amount of arsenic contained in these vegetables is not injurious. But,

as in the case here reported, persons sensitive to arsenic must be careful in their use of these fruits and vegetables. Fruits should be peeled before being eaten, and vegetables washed thoroughly before being cooked.

#### TRAVELING MEDICAL FACULTIES USED FOR GRADUATE EDUCATION

Traveling faculties in graduate medical education are being used by several state medical associations to insure the continued competence of the practicing physician and maintain the high quality of medical care for the people, an editorial in the *Journal of the American Medical Association* for Nov 4 points out.

"The problem of continuation study for practicing physicians is no longer one concerned exclusively with education, transportation is beginning to be of considerable importance," the editorial says. "A graduate program may be quite sound educationally and yet fail if it does not bring competent instructors to physicians desirous of continuing their studies. This is especially true in the more sparsely settled areas of the United States and in those states without medical schools.

"For the past five years the physicians of Idaho have appreciated the need for continuation study. To meet this need they have brought to the five-day annual meeting of their state association a flying medical faculty. Each year five or six instructors from one medical school have been invited to organize an integrated, correlated course of study of general interest to practicing physicians. Instruction in basic sciences has initiated discussions of clinical studies, and round table discussions have permitted attending physicians to participate.

"In 1939 the state medical associations of

Washington and Oregon arranged their annual meetings to utilize the same traveling faculty as was engaged in Idaho. Thus the physicians of three states have had the opportunity to attend, at their own annual meetings, a continuation course of study.

"Four other western states, Colorado, Utah, New Mexico, and Wyoming, have pooled their interests in graduate studies to bring, every two years to one of their states, twenty out-of-state speakers to discuss problems of medicine and public health which are peculiar to the Rocky Mountain region. The medical society in each state has been represented on the executive committee and a different state society has acted as host every two years. The first Rocky Mountain Conference was held in Denver in 1937, the second in Salt Lake City in 1939, and the next meeting is scheduled for Wyoming.

"Thus seven states, five without a four-year medical school within the borders of the state, have provided graduate opportunities for practicing physicians. Frequently physicians travel from 100 to 250 miles to attend one- or two-day regional meetings.

"There still remain, however, physicians who are unable to leave their practice even for a short time to travel the distance required. For them provision is now being made, the instructors traveling throughout the state so that continuation study may be brought to a greater number of communities."

#### COMING—TWO HUNDRED MILLION COLDS!

Because victims of colds do not worry about passing their affliction on to others, there will be two hundred million colds in the United States this winter, Robert Toubib, Washington, D C, estimates in the November issue of *Hygeia, The Health Magazine*.

As for treatment, the author advises "Stay in bed, comfort yourself without the use of drugs, don't blow your nose too hard, and if your throat is sore, gargle with some hot salt or soda solution.

"Because the doctors have not found a dramatic cure or prevention for colds, all the neighbors, the pseudoscientific dreamers and the commercial sharpers believe themselves licensed to attempt to solve this problem. They know that a cold infection is frequently admitted via the nose and mouth, that there are some two dozen

organisms living in the average mouth and throat, and, most important of all, the commercial sharper knows that the cold victim is the ideal sucker. On this basis, he devises a mouth wash and gargle which will kill bacteria in the least possible number of seconds.

"Sprays and nose drops shrink the inflamed mucous membrane of the nose and pharynx. Unfortunately, they also decrease the action of the ciliated epithelium—those little hairlike projections which nature has provided to sweep out the secretions. Many physicians feel that the latter effect slows up recovery. However, it is recognized that under some conditions (the failure of the sinuses to drain, for example), these remedies have real value when used as they should be. The nasal douche is passing into the oblivion it has long deserved."

# Case Reports

## GAS GANGRENE OF THE TRUNK WITH RECOVERY AND RESIDUAL CARDIAC DAMAGE

ROBERT L. SEWELL, M D, Rochester, New York

(From the Department of Surgery, University of Rochester, School of Medicine and Dentistry)

THE presentation of this case of C Welchii infection of the trunk is prompted, primarily, because of the remarkable extent it attained, and incidentally, because of the interesting cardiac involvement occurring during the course of the disease

### Case Report

F T, a 50-year-old Italian male, was first seen at the Strong Memorial Hospital on August 16, 1938, when he appeared with a complaint of "bad piles" of one week's duration

For ten years he had had hemorrhoids which occasionally caused pain on defecation, but neither prolapsed nor bled. A week before admission he first noted a painful swelling just to the right of the rectum which gradually increased in size and painfulness in the next several days. He visited a clinic in Rochester where he was given a prescription for suppositories. On inserting one, several days later, he noticed pus coming from about his rectum. Three days before admission his scrotum began to swell, became red and quite painful, and, in the following two days the persistence and the increasing severity of the pain and swelling prompted him to come here.

The family history and past history were not relevant. In view of subsequent findings it was of interest that there were no complaints or symptoms suggestive of cardiac disease.

**Physical Examination**—His temperature was 38.6 C, pulse 100, respiration 24. The patient was a fairly well-nourished and developed Italian male, tending to favor his perineum on changing position.

The perineal tissues were markedly swollen on the right with a central area about 6 by 2 cm which was dark gray in color and oozing a very foul, thin, dark pus. From this area a ridge of swollen red tissue extended anteriorly to the scrotum which was swollen to about four times normal size and was red and tender. Over the dark gray area could be felt distinct crepitus. On rectal examination a tender, indurated area was felt on the right about 3 cm in diameter. Prostate was normal, sphincter tone good. Several small hemorrhoids were present.

In the general examination nothing of note was found. There was increased A-P diameter of the chest, but the lungs were clear and resonant throughout. The heart was not enlarged to percussion, the sounds were of good quality, the rhythm regular, and there were no murmurs. B.P. 125/80. The abdomen was not remarkable. Urine examination revealed a trace of albumin, 4 plus sugar, and the presence of acetone.

A tentative diagnosis was made of diabetes and of gas gangrene of the perineal region, probably secondary to an ischio-rectal abscess. He was given 20 units of insulin and 10,000 units each of Vibron Septique and C Welchii antitoxin, and was taken directly to the operating room.

Under nitrous oxide and ether, the urethra was first investigated and found normal, and the perineum and perirectal tissues then widely incised and drained. Dakins tubes were inserted. A retention catheter was put in place and the patient was returned to the division. The presence of a gas infection at the time was obvious and cultures taken at operation revealed C Welchii, Escherichia Coli and a nonhemolytic streptococcus.

In the ward he appeared quite ill, but was rational. He was given intravenous glucose and parenteral fluids, and his diabetes was regulated with insulin fairly satisfactorily within 24 hours. A definite diagnosis had been made on the basis of blood sugar readings of 240 mgm per cent. Insulin requirements were about 40 units daily.

**First Postoperative Day**—The patient appeared much sicker and weaker, and complained of pain in the perineum and left flank. Crepitus was found extending all through the left buttock and back into the flank. He received 400 cc of blood, 10,000 units each of Vibron Septique and C Welchii antiserum and was started on sulfanilamide, 2.5 grams a day.

**Second Postoperative Day**—Patient was desperately ill, almost comatose, temperature fluctuating from 38.0 to 39.0 C. Parenteral fluids were maintained throughout and intravenous glucose with insulin was given. He received more C Welchii antiserum (10,000 units), by this time the crepitus was readily palpable over the left lower quadrant anteriorly, incision and drainage was then carried out over the anterior superior spine on the left and the symphysis. He was given another blood transfusion. He was also given 6.5 grams of sulfanilamide by mouth. Later in the day crepitus was found through the entire shaft of the penis as well as through all of the previously involved tissues which had become dark and swollen. He had a severe chill and was, unquestionably, critically ill.

**Third Postoperative Day**—He had another chill, was thereafter practically moribund, and little hope was held for his recovery. Late in the day it was decided to give him some irradiation, so he received 300 r over the anterior abdomen on the left and posteriorly over the pelvis. It was thought that the serum was doing no obvious good, so for the time it was withheld. Sulfanilamide was discontinued.

TABLE—BLOOD PRESSURE IN CASES OF POLIOMYELITIS

Case	Sex	Age	Polio at (Age)	Blood Pressure	
D A	M	17	18 mo	128/80	128/80
A B	M	17	6 mo	140/84	
A R B	M	28	14	180/120, 172/114, 154/114, 170/114	180/114
L B	M	26	9	160/110, 158/100	
R B	M	38	21	140/82	138/80
A C	M	30	7	158/110	
E C	M	17	18 mo	144/88	
L C	M	25	3	176/106	176/100 205/110, 190/120
M C	M	47	1	120/74	
D E	M	29	15	154/100	140/90
G E	M	31	8	180/85, 140/85, 150/78	
J F	M	23	7	134/88	
P F	M	69	58	180/102, 190/102	
S F	M	18	18 mo	134/92	130/90
W F	M	22	11	142/84, 144/88	
G G	M	24	2	128/80	
J H	M	33	14	148/92	
H H	M	20	20 mo	130/88	130/88 132/84
W R	M	29	13 mo	130/90	130/92
W R H	M	48	31	114/80	
A K *	M	24	6	100/64, 96/62	
G K	M	33	1	122/88	
R L	M	44	11 mo	119/82	
C M	M	20	2	129/84	
R M	M	19	21 mo	116/60, 118/62	
S M	M	18	2	128/84	130/84
R P	M	23	4	160/88	
H S R	M	24	21	116/82, 120/84	118/82
F S	M	19	2	134/86	128/86
F R S	M	19	2	144/86	138/82
L S	M	31	3 1/2	168/108	
W S	M	10	4	110/70	
H T	M	21	4	128/74	124/74 122/74
N W	M	30	3	124/76	
R W	M	22	8	176/84	
M A	F	26	5	120/82	120/82
M G	F	27	1 1/2	128/84	
G H	F	29	11	152/100	
M H	F	24	7	116/68	
E J	F	20	2 1/2	138/78, 138/78	
C K	F	21	4	112/84, 118/80	118/82
D K	F	38	10	110/72	118/70
M P	F	19	14 mo	119/86	
H B S	F	32	15	102/80	118/78

\* Died of pulmonary tuberculosis two weeks later

had the disease, there being little if any residual atrophy in the muscle groups originally affected. There were some, however, who were badly crippled by their loss of muscular power. The majority were visibly nervous and high strung. Quite a few had rather frequent attacks of epistaxis. Curiously enough, only one of the girls examined had an abnormal pressure.

## Summary

A small series of cases is reported in which arterial hypertension is associated with the stigmata of healed anterior poliomyelitis in young adults. No mention of this is found in medical literature, and it is believed that the possible association warrants further study.

## TOO MUCH OF A GOOD THING

The daily soap and water bath, which has become such an important part of the American health regimen, may be an actual menace to the health of one's skin during the winter months, if taken indiscriminately, Eugene F. Traub, M.D., New York, declares in *Hygeia, The Health Magazine* for December.

He points out that lack of exposure to the sun and too much dry heat during the winter have a tendency to dry out the skin. In persons whose skin is naturally rather dry, this dryness may progress to an eczema or winter dermatitis.

Such persons, therefore, especially if they are

over 40, would do well to limit their bathing to two or three baths a week, as the alkali and other factors in most soaps act as further irritants. Bran, cornstarch, or baking soda may be added to the water to soften it. Warm water tends to extract more of the natural oil of the skin than does cool or cold water.

Suitable lubricating preparations may be applied to counteract the tendency to dryness. Goose grease, lanolin, petroleum jelly, or cold cream are all suitable, and to them may be added medicaments to promote healing, allay itching, or produce a cooling effect on the skin.

## CONTUSION OF THE HEART\*

JULIUS BURSTEIN, M D, and RICHARD H MARSHAK, M D, New York City

(From the Department of Electrocardiography at Morrisania City Hospital)

**C**ONTUSION of the heart as a definite clinical entity, with electrocardiographic changes simulating that of myocardial infarction, has been known for a few years and there have been many reports in the literature describing its syndrome. The usual type of injury to the heart is of the penetrating variety. Recently, a new type of injury to the heart has been described by Beck<sup>1</sup> as the nonpenetrating type of injury to the heart. We have had the occasion to see two such cases at Morrisania City Hospital and, recently, a third has come under our observation.

We have been able to demonstrate electrocardiographic changes not only in the conventional three leads but also in the precordial lead. It is the purpose of this paper to stress this new type of injury causing contusion of the heart and to show the value of the electrocardiogram, with special emphasis on the precordial lead in establishing a diagnosis. It is not the object of this paper to go into a detailed description of the clinical picture of contusion of the heart, but the sequence of events in one of the two cases to be described will adequately present the syndrome.

## Case Reports

**Case 1**—Patient is a white male, aged 37 who was admitted November 17, 1938, and discharged December 25, 1938.

**History**—The patient lost control of his car while driving and ran into an object, the nature of which is unknown. The steering wheel was jammed into patient's left chest. There was no history of unconsciousness. On admission, he complained of severe chest pain which was aggravated by respiration.

**Physical Examination**—The patient was a well-developed, well-nourished individual, in mild shock, with moderate cyanosis and dyspnea. The pulse was regular, rapid, of fairly good quality, and averaged 110 beats per minute. There was a bloody discharge from both nostrils and there were multiple lacerations about the bridge of the nose. The eyes reacted to light and accommodation normally. There was a distinct compression deformity about the lower aspect of the precordium with abrasions of skin over that area. The lungs were clear. The apical impulse of the heart was in the fifth intercostal space to the left of the midclavicular line. The heart sounds were of fair quality with a systolic murmur at the apex. The heart rate averaged 110 beats per minute and there was regular sinus rhythm.

On admission at 11 15 A. M. the blood pressure was 60 mm./40 mm. and the temperature was

98 F. No reading of the venous pressure was made, but two attempts to provide patient with an infusion resulted in clotting of the tube for a distance of six inches indicating a positive venous pressure. At 5 30 P. M. a manometer reading was 9½ cm of water pressure. At 10 30 P. M. it was 11 cm of water pressure. Blood pressure readings ranged from 60/40, 100/60, 110/66, 120/60, 120/60, taken at hourly intervals. Fluoroscopic examination revealed a quiet heart with no limitation of cardiac impulse. There was a slight enlargement of the left auricle. X-ray revealed evidence of fracture of the left fourth, fifth, and sixth ribs along the midaxillary line. The day following admission there was a suggestion of a friction rub over the apex which was transient. Fluoroscopic examination at this time showed no evidence of cardiac or pleural effusions. On November 19, 1938, the heart sounds were of good quality with a friction rub definitely heard over the apex. Venous pressure at this time was 10 cm of water. The patient was seen by a neurologist who found no evidence of focal injury, but his impression was that of a mild craniocerebral trauma. The diagnosis was made of contusion of the heart and the patient was treated with bed rest for six weeks. The temperature ranged from 100 F. to 102 F. for the first five days of admission after which it came down to normal. On November 22, 1938, five days after admission, a loud systolic murmur was heard at the apex with a suggestion of a presystolic murmur. The patient probably had rheumatic involvement of the heart despite the lack of a previous history. The urine was negative. Wassermann tests were also negative. Because of the possibility of a rupture of the heart or bleeding external to the heart, this patient was watched constantly for a possible indication for operation. However, his subsequent course was one of steady improvement.

An electrocardiogram taken November 17, 1938 (Fig 1A), showed a depressed T 1 and an inverted and diphasic T 4. On November 21 (Fig 1B), four days later, there was an inverted and coved T 2 and 3 and a diphasic T 4. On November 22 (Fig 1C), there was inversion and coving of T 2, 3, and 4. On December 5 (Fig 1D), T 2 was revealed in its normal upright position, T 3 was still slightly inverted, but T 4 was markedly inverted and coved. The tracing taken on December 27 (Fig 1E), revealed a complete return to normal as did the one taken on March 29, 1939 (Fig 1F). In the last record there is no evidence of previous cardiac damage.

Notched P 1, 2, and 3 were found to be persistent throughout the entire series of electrocardiograms in this case, and is consistent with the clinical diagnosis of previous rheumatic heart disease (mitral stenosis). This series of electrocardiograms showed definite evidence of injury to the heart, with findings simulating posterior wall infarction in leads 2 and 3. The earliest and most persistent abnormal finding was an inverted T 4 (Figs 1A through D). Specific

\* Report of two cases admitted to the Traumatic Service of Dr. Emmett A. Dooley at Morrisania City Hospital.

*Fourth Postoperative Day*—For the first time the patient appeared to be no worse. Crepitus still present in perineum, left flank, left gluteal region, left lower quadrant, and all through the scrotum and shaft of the penis. He was given 300 r more over the same anterior and posterior portals.

The next day he looked decidedly better, was rational, and complained bitterly of pain in the penis. The crepitus remained only in the perineum and the left buttock. He was given 200 r over the same two portals in the morning and again in the evening, at which time he received 10,000 units more C. Welchii antiserum.

Irradiation and serotherapy were then stopped and thereafter he was given 5.2 Gm. sulfanilamide and 10 cc. of 2½% per cent Protosil daily. Sulfanilamide level in the blood was 5 mgm. per cent. Irrigations were carried out with hydrogen peroxide, and the wounds began to clear up. On the twelfth day, numerous basilar rales were heard and the heart was found enlarged to the left. An electrocardiogram showed myocardial damage. The patient was rapidly digitalized and there was no further evidence of left-sided failure.

By the seventeenth day all drains had been removed and wounds were irrigated with Dakins solution instead of peroxide. The spleen, which had first been found enlarged on his fourth day, was much smaller but still was palpable. A successful secondary closure of his wounds was done and he was discharged on his seventy-third day to a convalescent home with one granulating perineal sinus.

His heart, definitely larger than on admission, had not perceptibly decreased in size during the last month and there was a blowing systolic murmur over the P. M. I. The spleen was no longer palpable but the liver on discharge descended two finger breadths below the rib margin.

The patient was last examined on January 4, 1939, over four months after admission. His heart was still enlarged as much as when he was discharged from the hospital, and the liver was still palpable two finger breadths below the costal margin on inspiration. There were no other abnormalities noted except that he had developed a ptosis of the right eyelid, associated with no other symptoms.

Examination of the extra-ocular muscles revealed apparently total paralysis of the superior, inferior, and internal rectus muscles and of the inferior oblique. No explanation is offered for this paralysis of the oculomotor nerve, for it is scarcely conceivable that it can be related to the foregoing disease.

The recent introduction of irradiation in these infections has led Kelly<sup>1</sup> and others to criticize the use of amputation and radical surgery in gas gangrene of the extremities, but as yet the surgeon has but little precedent to fall back on when the question of incision, drainage, or débridement occurs, for with both serum and x-ray at his disposal the problem is far different than it was ten years ago.

Certainly this man rapidly became profoundly ill following the wide incision and drainage, with rapid extension of his infection whereas he had presumably had the infection several days before he came to the hospital in only moderate

distress and had the infection fairly well localized. Even with irradiation it is evident that incision and drainage and débridement must at times be used as was necessary here. Whether the incisions prompted spread is questionable, but there was no doubt at the time the skin was laid open over the anterior superior spine and over the symphysis that the process seemed chiefly in the subcutaneous tissue and did not involve the muscle, and that the infection seemed to be extending in this region subcutaneously, while in the perineum and the buttocks all tissues were involved.

The remaining interesting feature of this case is the development of myocardial damage with early failure during the course of the infection. The experimental work of Pasternack and Bengston<sup>2</sup> in study of the effect of Vibron Septique toxin on animals indicated almost an affinity of the toxin for the heart muscle with very obvious and predictable pathologic lesions. The signs of early heart failure in this case were not recognized until the twelfth day, which is hardly comparable with the short times found experimentally. Then, too, this man's previous cardiac status is unknown except that there had been no referable symptoms. Nevertheless, the sequence of events suggest myocardial damage following the infection.

The systemic effects of gas gangrene infections are often not noted because the customary course of the disease is so fulminant that obvious signs of damage to the heart or other viscera are not manifest. The shock of the original injury or of an amputation and the more infrequent serum reactions further distort the picture and as a result the treatment is chiefly that of a local infection.

While irradiation and perhaps sulfanilamide are valuable aids to be used in conjunction with serum, at least the former is going to have its greatest value in those infections which are somehow refractory to serum treatment. In these instances the toxin already formed and distributed systemically will neither be neutralized by an effective antiserum nor be affected appreciably by the irradiation to the local lesion. Thus such patients who survive, as this patient did, will show much more clearly than those recovering after effective serum therapy the effect of the toxin on the various organs.

### Summary

A case of severe gas gangrene infection is presented in which irradiation was apparently the prime factor in instituting recovery. The occurrence of myocardial failure following the infection brings up the question of possible damage to the heart by the C. Welchii toxin.

### References

1. Kelly, J. F. *Radiology* 26: 41 (1936).
2. Pasternack, J. G. and Bengston, I. A. *The Experimental Pathology and Pathologic Histology Produced by the Toxin of Vibron-Septique in Animals*. National Institute of Health Bulletin No. 168.

A

B

C

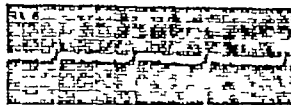
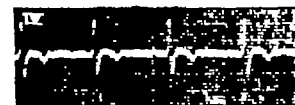
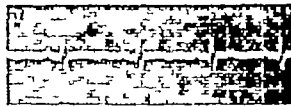
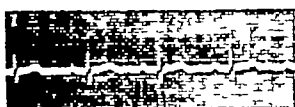


FIG 2

T 1, 2, and 3 There was a lesser degree of inversion of T 4 than in the previous record. The progression of changes in the above series of electrocardiograms indicate definite damage to the heart muscle. The rapid graphic improvement (ten days), seen specifically in lead 4, probably indicates damage of traumatic origin. We were unable to complete this series of electrocardiograms because of lack of cooperation on the part of the patient.

#### Comment

These 2 cases stress the value of electrocardiograms in establishing a diagnosis of contusion of the heart and indicate its value in chest injuries. In Case 1 the clinical findings of the contusion of the heart were substantiated by the graphic findings. In Case 2 the electrocardiogram alone was diagnostic. We feel that contusion of the heart of the nonpenetrating variety will become a much more frequent diagnosis if routine electrocardiograms are taken on every case of external injury to the chest. It is our practice at

Morrisania City Hospital to take tracings on every patient with a history of injury to the chest wall in order to aid in the diagnosis of possible cardiac trauma. We recommend a careful history in every automobile accident case because of the possibility of heart damage due to chest-wall injury (steering wheel accidents, etc.)

The precordial lead was of definite value and was the earliest and most constant finding on the electrocardiogram in these 2 cases.

#### Summary

1 The electrocardiogram is of aid in establishing a diagnosis of contusion of the heart of the nonpenetrating variety, particularly when a clear clinical picture is absent.

2 Every case of injury to the chest should be considered in the light of a possible contusion of the heart until proved otherwise.

#### Reference

- 1 Beck, Claude S. J. A.M.A. 104 104-109 (1935)



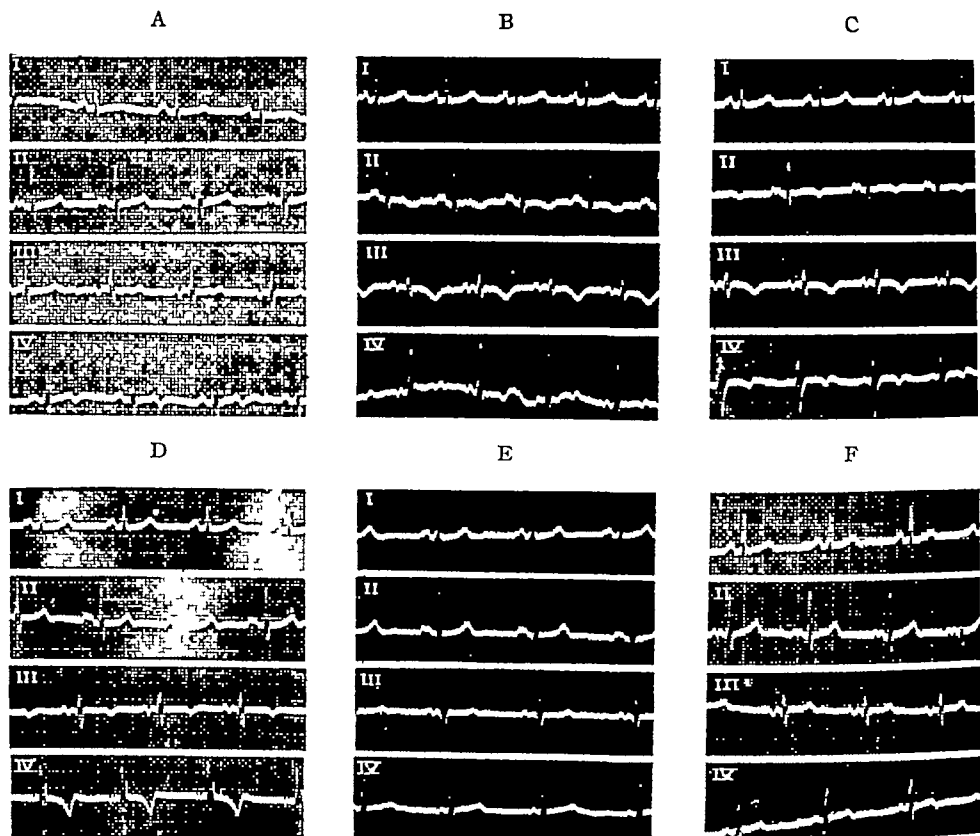


FIG 1

treatment consisted of bed rest and sedation. Electrocardiograms taken two months after discharge showed no abnormality (Fig 1F). Questioning of the patient three months after the accident revealed that he complained of occasional precordial distress upon exertion but had no objective findings.

**Case 2**—A white male, aged 32, was admitted November 22, 1938, and discharged December 7, 1938.

**History**—On the day of admission, the patient's car collided with another car and he immediately experienced excruciating pain over the sternum. On admission to the hospital, he was drowsy, had an alcoholic odor to the breath, but he gave no history of vomiting. During the period of observation he was unable to remember the accident. He did not complain of headache or dizziness. He did, however, complain of severe pain over the sternum at the level of the fourth and fifth ribs, which was worse on respiration.

**Physical Examination**—The patient entered the hospital in a semiconscious state but soon regained complete consciousness. He responded to all questions and was fairly well oriented. The blood pressure at the time of admission was 120 mm/70 mm. The examination was negative except for severe pain over the sternum with contusion of the same area. The diagnosis

at that time was craniocerebral trauma, contusion of the sternum, possible contusion of the heart, and possible fracture of the fourth, fifth, and sixth left ribs. The chest pain continued for five days. Radiographic examination of the chest revealed displacement of the xiphoid of the sternum but there was no evidence of fractured ribs. Electrocardiograms showed definite changes confirming the diagnosis of contusion of the heart. The temperature was normal except for the first three days when it was elevated to 100 F. The treatment consisted of absolute bed rest and sedation.

In contradistinction to the first case, this patient revealed no cardiac syndrome which would physically indicate heart trauma. Nevertheless, the contusion of the chest wall definitely required further investigation by means of serial electrocardiograms. A tracing taken the day after admission (Fig 2A) showed a depressed T 2, an inverted T 3, and an inverted and coved T 4. This is undoubtedly indicative of definite damage to the heart muscle. A second electrocardiogram taken five days later (Fig 2B) showed a depressed T 1 and 2. The T wave in lead 3 changed from inversion to the isoelectric level. Inversion and coving of the T wave in lead 4 was seen to be less marked. The final tracing on this patient, taken December 5, 1938 (Fig 2C), disclosed a persistent depression of

Blood pressure was 154/78. The abdomen was distended, fluid was absent, the liver was enlarged, no abnormal masses were felt. Urine 1014, trace of albumin, few pus clumps. Spinal fluid was normal. X-rays of hands, chest, and skull showed osteoarthritis of interphalangeal joints, marked dorsal scoliosis, thickened left pleura, hyperostosis of inner table of frontal bone and a calcified mass in the dura of the occipital region. Histology of a cervical node showed Hodgkin's disease.

The course was steadily downward. She developed swellings beneath the angles of both jaws, and signs of pneumonia. Death occurred June 1. Temperature was 99 F to 101 F, later was 103 F to 105 F, pulse in relative proportion, respirations, 30-50.

Necropsy (No 5215) was performed ten hours later. Only the pertinent findings are abstracted.

There was a generalized lymph adenopathy, the thoracic nodes being least involved. The largest mass was in the right lower abdominal quadrant. The liver and spleen were enlarged. The appendix lay retroceally, was bound down by dense adhesions, the tip had perforated into the cecum and there was a through-and-through channel from the orifice. The submaxillary glands were purulent. The fingers of

both hands, and the ears had a dry gangrene. The toes were slightly cyanotic and not gangrenous. The right hand and forearm were edematous. A calcified meningioma was in the posterior fossa. The spinal cord was not removed. One digital artery examined appeared normal.

Histology revealed Hodgkin's granuloma of all the nodes, heart, liver, spleen, adrenals, and pituitary body. The bronchial nodes were only slightly affected. The meninges had a non-specific mild granulomatous reaction.

The left common carotid, left subclavian, and right innominate arteries had a very slight atheroma. In the digital artery the lumen was narrowed. The internal elastica showed an extraordinary reduplication interspersed with extremely fine elastic fibers. The media was greatly thickened and the muscle bundles separated by fine elastic fibers. The adventitia was normal. The digital vein and nerve were somewhat fibrous and without inflammatory reaction.

Anatomic diagnoses: Hodgkin's disease of lymph nodes, spleen, liver, adrenals, heart, and pituitary body, acute bronchopneumonia, acute suppurative inflammation of submaxillary glands, remote appendicitis with appendico-colic fistula, meningioma of dura, Raynaud's disease, remote herpes zoster.

## TULAREMIA IN NEW YORK STATE

FRANK N. DEALY, M D, and ELIOT DUHAN, M D, Jamaica, New York

THE purpose of this presentation is to remind us that this disease can occur and does exist in New York City. It further stresses the need for a careful and complete history in the recognition of tularemia.

Before January 30, 1939, no cases traced to native animals were reported in New York State. It is of interest to note that a communication received on October 7, 1939, from the New York State Health Department Division of Communicable Diseases, states: "We have encountered two instances in which tularemia was apparently contracted from wild animals in upstate New York. In the first instance, tularemia apparently was contracted from a rabbit, which was shot in the town of Wolcott, Wayne County. In the second instance, tularemia apparently was contracted from the bite of a muskrat." Francis shows that up to 1937 only 4 cases had been reported from the New England States. No case has ever been found in Vermont or Connecticut. The 3 cases below were contracted from rabbits which were imported into New York State. Investigation by the United States Public Health Service reported an increase of tularemia in the eastern states.

### Case Reports

Case 1—M. J., colored female, 32 years old, was first seen in the outpatient department of the Queens General Hospital, on service of one of us (F. N. D.), at which time she had a swelling

of the left axillary region which had been incised two days previously in the emergency room. Routine dressings were applied for about four weeks. Sluggish healing prompted a more careful inquiry into the history, and the following facts were revealed.

The patient had dressed a rabbit and at the time there was present a small cut of the terminal phalanx of the left middle finger. About three days later this finger became swollen and inflamed. This infection was associated with "grippe" (generalized aches and pains, chills, and fever). The course was typical. The mass in the left axilla developed eight days later. At this time the patient went to the emergency room of the Queens General Hospital, where the mass was incised. Three weeks later nodules appeared on the forearm and patient was hospitalized. All remaining history was irrelevant.

On admission there were no systemic signs—temperature, pulse, and respirations were normal. There was a small healed scar over the terminal phalanx of the middle finger on the upper left extremity. On the extensor surface of the left arm there were small nodules about one centimeter in diameter. They were freely movable under the skin and were not tender. Subcutaneous nodules, simulating sporotrichosis, have been noted on the forearm and arms in 49 cases. In the lower anterior portion of the left axilla there was a rounded, irregular punched-out ulcer about one and a half centimeters in diameter. It was discharging yellowish purulent material. There was a hard tender mass higher up in the axilla. Right extremity showed no lesions.

The laboratory findings were white blood count 6,600, polymorphonuclear 74 per cent,

## NEUROLOGIC COMPLICATIONS IN HODGKIN'S DISEASE

JAMES R LISA, M D, New York City

*(From the Pathological Laboratory, City Hospital, Welfare Island, Department of Hospitals)*

**T**HE case reported in this communication is one of Hodgkin's disease complicated by herpes zoster and Raynaud's disease. Neurologic complications in Hodgkin's disease are comparatively rare. Two distinct neurologic conditions are so unusual that it seems to justify the report of such an instance.

**Case Report**

The patient, a 63-year-old white woman who appeared somewhat older, was admitted to City Hospital, Medical Service of Dr W Laurence Whittemore, on May 22, 1939, because of fever and of pain in the fingers and toes.

There was but little pertinent information in the past history. Several years before, after her second marriage, she had been ill, the exact nature of which was unknown. In 1934 or 1935 a simple mastectomy for fibroadenoma of the right breast was performed. Roentgen examination of the chest and skeleton before operation was negative, histologic examination showed the absence of cancer.

The present illness began in July, 1937, with an attack of herpes zoster of the left chin, arm, and chest. The left axillary nodes were enlarged, the mass extending down to the breast. They continued to increase in size, seemed to fluctuate, and then regressed.

During August, burning on urination developed. A large vulvar mass was discovered and a 4 plus glycosuria, with acetonuria and a blood sugar level of 330 mg. The diabetes was quickly controlled by insulin and diet. After a few injections, further insulin therapy was refused. The glycosuria continued for about four months.

After the herpes subsided, the skin of the hands and feet became very sensitive. She complained of a sensation "as if the fingers were rough and had sand in them," and she could not perform delicate movements, such as picking up a needle. Blanching of the fingers also occurred and apparently there developed a hyperextension of the distal phalanges. Later there was a hard brawny edema with a stocking and glove distribution, stopping sharply at the ankles and wrists. The edema gradually subsided and disappeared completely by late March or early April, 1938.

Following the herpes, many attacks of profuse night sweats and acute coryza occurred. The latter appeared allergic in character. They were abrupt in onset and termination, and were accompanied by profuse nasal and lacrimal discharge.

From September, 1937, to April, 1938, she ran a fever of unknown origin. Tests for the enteric infections and Malta fever were negative.

During November, 1937, she complained of weakness, began to lose weight, and had periods when she was irrational, incontinent, and would faint after getting up.

In December, she was admitted to Queens General Hospital, from which the following data were obtained. "The patient was a short elderly woman complaining of coldness of the extremities and apparently in fair general condition. The greater part of the right breast had been removed by simple mastectomy, the transverse scar was well healed, there was no evidence of local metastases. In the right axilla were three enlarged firm nodes which felt like metastases. The right supraclavicular nodes were small and hard, the left axillary were enlarged, fairly fixed and measured 5 by 5 cm. There was one node 2 by 1 by 1 cm in the left supraclavicular fossa. The left breast was normal. Scars of herpes were present. X-rays of the chest and skeleton failed to reveal any evidence of metastases."

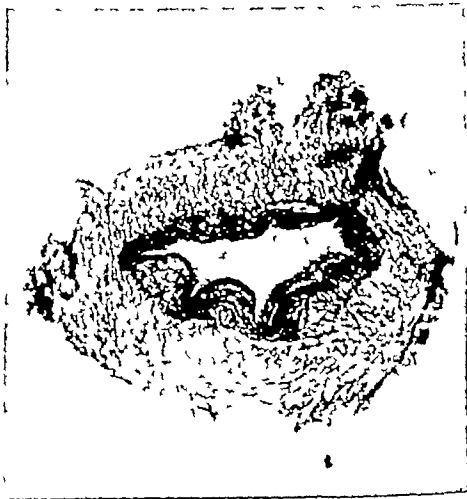


FIG 1 Photomicrograph of a digital artery showing the marked reduplication of the internal elastica and the fine elastic network of the media (Low power, elastic tissue stain)

On February 10, 1938, she was admitted to another hospital presenting the clinical features suggestive of diabetic coma. Glycosuria, however, was absent and the blood sugar, N P N, and creatinine were normal. For two months she had suffered from orthopnea, cough, edema of ankles, hands, and forearms. X-rays of chest and colon were negative. Under codliver oil and yeast she improved greatly, by Easter she felt much better than she had for several months. She was discharged on April 10.

On May 22, she entered City Hospital. The most striking feature was a symmetrical dry gangrene of toes, fingers, elbows, and ears. The cervical nodes were discrete and hard. The axillary nodes were large and soft and felt cystic.

# Medical News

## County News

### Albany County

The annual dinner of the Medical Society, County of Albany, was held on the evening of December 13 at the DeWitt Clinton Hotel. The speaker was Prof. Burges Johnson, professor of English at Union College and former editor of *Judge* and *Harper's*.

### Chemung County

A resolution urging that the two existing hospital laboratories be used as a county laboratory and that a full-time health officer be placed in charge of a county health unit was adopted unanimously by members of the Chemung County Medical Society at a meeting in Arnot-Ogden Hospital on November 21.

The physicians indicated a tremendous saving for Elmira and Chemung County residents should the plan be adopted over a proposal to erect a new building or set up new laboratories.

Sixty-six of the society's 78 members attended the meeting called by Dr. Rene Breguet, president, to hear a report from a special committee composed of Dr. William T. Boland, chairman of the medical society of St. Joseph's Hospital, Dr. Arthur W. Booth, chairman of the Arnot-Ogden society, and Dr. George R. Murphy, president-elect of Chemung County Medical Society.

The committee proposed a county medical unit embracing a full-time county health officer and a complete county laboratory with services open to every citizen in the county whether a hospital patient or not. The laboratory would be in two parts, utilizing the existing hospital laboratories with slight additions to each. The work would be divided evenly.

By using the two hospitals and the existing setup both a great saving to the county and an extension of services would result, the physicians asserted.

Deputy town health officers similar to the present town health officers would be under the direction of the one head, the county health officer, and their work more thoroughly unified. The entire work of public health would thus be correlated between the city and the towns.

### Clinton County

The annual meeting of the Clinton County Medical Society was held at the Witherill Hotel, Plattsburg, Tuesday, November 21. Dr. Elmer Wessell presided. The following officers were elected for 1940: president, Dr. A. B. de Grandpre, vice-president, Dr. Eric Pearson, secretary, Dr. Thomas R. Marvin, treasurer, Dr. Kenneth Clough, censors, Dr. T. A. Rogers, Dr. I. A. Rowison, and Dr. Elmer Wessell, delegates, Dr. Leo Schiff, Dr. L. G. Barton, Jr., alternate. The business meeting was followed by a dinner, after which Dr. Lyman G. Barton, Sr., delivered an address on "Medical and Surgical Practice in the 1890's."

### Errie County

"The medical profession has no right to consider the question of state medicine only in terms

of its personal interests," said Dr. Terry M. Townsend, president of the Medical Society of the State of New York, speaking before the Erie County Medical Society on November 20.

"The fate of the patient is at stake," said Dr. Townsend. "State medicine is forced medicine. You'll take it and like it. It is the doctor's dole, the patient's subsidy. The patient will do what he's told, the doctor will do what he's told. And the telling will be done by an office holder who wouldn't know what to do with a patient if he had one, but thinks he can tell the specially trained man how to do what he himself cannot do."

"The patient will give up the freedom of choice of physician for the illusory benefit of medical care he may consider to be of questionable quality because he did not have to pay anything directly to get it, though by indirect taxation he will pay plenty and never know it."

Dr. Townsend urged the medical profession to take the public into their confidence, and present their views fully. "When the reasons for the doctor's opposition to state medicine are fully known," said Dr. Townsend, "the public will become aroused and refuse to submit to interference with a system which has been brought to a high state of perfection by years of effort in the public interest."

In the course of committee reports, Dr. Harvey P. Hoffman of the medical indemnity committee reported that the state insurance department, at an Albany conference, had approved the Western New York Plan, Inc., sponsored by the Erie County Medical Society, as sound. Dr. George R. Critchlow of Buffalo has been made chairman of a state committee of physicians to advise the insurance department, and Morey C. Bartholomew, the Erie County society's attorney, has been appointed to a legal advisory board.

"Ours is not only the first plan of its sort to be chartered in New York State," said Dr. Hoffman, "but is proving a guiding influence throughout the rest of the state."

Approval of a case-finding survey by means of x-ray examinations of the Negro population of Buffalo has been voted by the Health Board. The Buffalo Tuberculosis Association is to make the survey in cooperation with the Health Department.

At the same time, the board authorized establishment of a free clinic for tuberculosis diagnosis in the J. N. Adam Memorial Hospital in Perrysburg. Visitors to the hospital who request the service will be examined.

### Franklin County

Dr. Wayne Henning of Stony Wold Sanatorium was the principal speaker at the regular meeting of the Saranac Lake Medical Society on November 15 in the John Black room. A large number were present. In addition to Dr. Henning, several members of his staff at Stony Wold spoke.

### Fulton County

The November meeting of the Fulton County Medical Society was held on the 17th at the

lymphocytes 26 per cent, urine negative, and a positive agglutination in serum dilution of 1 320 B tularensis was obtained from the Board of Health Discharged "cured" January 27, 1936

*Case 2*—W K, a butcher aged 54, on December 30, 1936, while cleaning a rabbit at home "stuck himself with a broken rabbit bone" He applied the ordinary antiseptic precautions immediately to the punctured area

Except for rheumatic fever fourteen years prior, the past history was negative On December 31, 1936, he called an ambulance because he felt very sick He had a pain in the affected arm as high as the axilla The initial lesion was on the right thumb At the time he was seen by the ambulance surgeon his temperature was 105 F For the next four days he was delirious On the fifth day the patient personally incised the thumb with a pin and pus was expressed He was seen by the writer who removed a piece of rabbit bone from the thumb On the second day following the injury he noticed a large lump in his axilla The symptoms of high temperature, sweats, and a tender adenopathy in the axilla lasted for eight days During the second week of the illness he had an erythematous macular rash on his face and neck, which cleared up spontaneously in a few days

Serum agglutination for B tularensis was positive in dilution of 1 640 during the third week.

When the patient was admitted to the Queens General Hospital to service of Dr Thomas on January 28, 1937, he had a normal temperature and was not acutely ill, but his axilla was incised and yielded a yellowish purulent material The wound healed spontaneously in two months

*Case 3*—A S, a butcher aged 23, on January 8 1935, while cleaning a wild rabbit, accidentally punctured his right index finger with a broken bone He applied iodine and a dry dressing On January 11 he became ill, and complained of malaise, general aching pains in the extremities with fever and a slight cough His temperature was 103 F The patient was treated for influenza On January 24 he complained of a painful swelling in his right arm pit He showed a wound on his right index finger which was ulcerating A tentative diagnosis of tularemia was made

On January 25 his blood was negative for B tularensis agglutination On February 1 a positive dilution titre of 1 1,280 was found, showing that though agglutinins were slow in appearing they reached a very significant level

The node enlarged to about two and a half inches in diameter and gave evidence of ulceration By February 24 many nodes had appeared along the course of the lymphatics of the forearm, beginning at the base of the right index finger, and the patient was admitted to Mary Immaculate Hospital to service of Dr Flessa.

On February 26 an incision and drainage was performed upon the large fluctuating mass in the right axilla, and watery yellow pus was found

The patient was discharged on March 4, 1935, with a drainage wound in the right axilla

The blood examination at the hospital showed a negative Wassermann reaction, a positive agglutination reaction for B melitensis—1 320, and a positive reaction for B tularensis—1 640 The

laboratory findings revealed a negative urine, a complete blood count—red blood cells 3,670,000, hemoglobin 70 per cent, white blood corpuscles 15,000, lymphocytes 21 per cent, polymorphonuclear 78 per cent, and monocytes 1 per cent

## Discussion

The 3 cases reported above illustrate the ulceroglandular type of tularemia, the most common form The other forms of this infection will not be discussed

The usual onset is sudden and manifested by headaches, vomiting, chilliness, aching through the body, and fever A few cases are ambulant throughout In most cases it is confused with influenza The primary sore at the site of infection develops as an inflamed, painful, swollen papule which suppurates leaving a punched-out ulcer about one centimeter in diameter This heals and is replaced by scar tissue Pain in the area of the lymph glands regional to the point of infection appears within two or three days after the onset The regional lymph nodes become enlarged and reddened and occasionally remain hard, but suppurate in the majority of cases The other clinical forms of tularemia, namely oculoglandular, glandular, and typhoid are less frequent in occurrence

A diagnosis is established by a history of contact with rodent or rabbit, or tick bite symptoms and physical findings An intradermal test may be done which becomes positive on the fourth day This test is as yet not generally used Agglutination by the patient's serum is positive after the tenth day and the highest titer of agglutination is reached in three or four weeks Guinea-pig or rabbit inoculation with the blood of the patient or seropus from the ulcer or the regional lymph glands results in from four to ten days in a typical ulcerative and suppurative adenopathy in the animal

One attack, as far as we know, confers lifelong immunity

Suppurative nodules and glands should be incised and drained only after suppuration is well advanced

Serum treatment as developed by Foshay has been used with good results

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Keschner, W Bayard Long, Maximilian A Ramirez, Nathan Ratnof, Henry B Richardson

The New York Physicians Art Club held its annual dinner and meeting on November 16 at the Hotel Gramercy Park. Dr W Morgan Hartshorn, newly elected president, took office, succeeding Dr Stan Bauch. Plans were discussed for holding the club's annual art exhibition here next Spring, jointly with the American Physicians Art Association.

Dr John Rogers, seventy-three, surgeon and pioneer in the surgical and medical treatment of diseases of the thyroid gland, died on November 19 after an illness of several months at his home, 164 E 72nd St. He was professor of clinical surgery at Cornell University Medical College and secretary of the faculty until he retired a few years ago. He joined the faculty in 1898.

#### Schenectady County

At the annual meeting of the Schenectady County Medical Society on December 7, held at the Mohawk Golf Club in Schenectady, the following officers were elected for the year 1940: president, Dr F Leslie Sullivan, vice-president, Dr E MacD Stanton, secretary, Dr Joseph H Naumoff, treasurer, Dr Charles E Wiedenman, board of censors, Drs Arnaldo A Samorini, Glen Smith, William F Nealon, delegate to the State Society, Dr William C Treder, alternate, Dr Joseph H. Cornell, delegate to the Fourth District Branch, Dr Charles Rourke, alternate, Dr I Shapiro.

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Dr Charles Gordon Heyd of New York City, former president of the American Medical Association, spoke on "The Romance of Modern Surgery." Also on the program was the premier showing of a new sound movie, "Man against the World." The picture told the story of surgery's inception in 1852 with the first major abdominal operation.

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"His fame," said Dr Townsend, "is richly deserved—the fame of well-doing."

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The 134th Annual Meeting of the Suffolk County Medical Society was held at the Huntington Crescent Club, Wednesday, November 1. The following officers were elected: president, John Sengstack, Huntington, first vice-president, George Bergmann, Mattituck, second vice-president, David Corcoran, Central Islip, secretary, Edwin P Kolb, Holtsville, treasurer, Grover A. Sillman, Sayville, censors, Paul Nugent, Leon Barber, Louis Garben, George Thompson, and Cyril Drysdale, delegates to State Society, John Sengstack and Coburn Campbell, delegates to 2nd District Branch, David MacDonnell and Earl McCoy.

At the scientific session, valuable information on the Workmen's Compensation Law was given

Hotel Johnstown with Dr John A Shannon, presiding

A short business session was held followed by a talk by Dr Joseph S Lawrence, executive officer of the New York State Medical Society

Dr Lawrence devoted his address to "Socialized Medicine" He emphasized the fact that there is one doctor to every 500 people residing in the state, also one hospital bed for every group of 259 residents Dr Lawrence pointed out that throughout the entire state, there isn't a person who isn't living within one-half hour's distance from either a physician or a hospital

### Kings County

Life insurance was the topic at the meeting of the Medical Society of the County of Kings on November 21 Addresses were delivered as follows

"Savings Bank Life Insurance and Doctors," Cornelius V Coleman, Brooklyn

"Organized Dollars at Your Command Pertinent Suggestions for Doctors on Making the Best Use of Their Life Insurance," Benjamin Alk, C L U, Manhattan, President, The Life Underwriters' Association of the City of New York

"Establishing an Economic Program," J Arthur Buchanan, M D, Brooklyn, Chairman, Economics Committee, Medical Society of the County of Kings

The tenth clinical meeting of the Brooklyn Thoracic Society was held at the Kings County Hospital on November 24 Dr William H Field, Dr Henry Louria, Dr Herbert Maier, and Dr Harry Reibstein, took part in the "Symposium on Empyema" Discussion was opened by Dr Edwin J Grace.

### Madison County

At the 133rd annual meeting of the Madison County Medical Society, in Oneida, Dr E T Centerwall, Morrisville, was elected president He succeeds Dr Ernest Freshman, Oneida, who was named delegate to the State Medical Society meeting next May

Other officers are Dr Howard Beach, Oneida, vice-president, Dr Lee S Preston, Oneida, re-elected secretary, and Dr Paul Ferrara, Canastota, treasurer The board of censors includes Dr E H Carpenter, Dr Otto Pfaff, Oneida, and Dr O S Langworthy, Hamilton.

The program consisted of election of officers followed by papers, as listed

"The Medical Care of County Welfare Patients," by Lee C Dowling, Deputy Commissioner, New York State Welfare Department, Albany

President's address, "Albuminuria in Children," Dr Ernest Freshman. "Peripheral Vascular Disease," Dr Arthur N Curtiss, Syracuse Illustrated by slides

"Pneumonia—Diagnosis and Treatment," Dr Henry V Hyde, Syracuse.

### Onondaga County

The Syracuse Academy of Medicine had as the features of its meeting at the University Club on December 10, three case reports "Report of a Case of Trachoma" by Dr James F Cahill, "A Case of Complete Placenta Praevia" by Dr C W Kenney, and "The Use of Vitamin K in Jaundice" by Dr Geo S Reed

At the meeting of the Obstetric Society of the Syracuse hospitals, held Tuesday, November 14, at the College of Medicine, the following resolution was passed

WHEREAS, it has been found that maternal deaths as a result of criminal abortion are a constant factor in maintaining the present high maternal mortality rate,

Be It Resolved, that the members of the Obstetric Society of the Syracuse hospitals investigate each case of criminal abortion which comes to their attention and report to the District Attorney the evidence and names of each person or persons involved, and cooperate to the fullest extent in the legal prosecution of those concerned.

### Orange County

The annual meeting of the Orange County Health Association was held at the Storm King Arms, Cornwall-on-Hudson, on November 8, when Dr Roswell L Schmitt of Middletown was elected president He succeeds the Rev Dr Forest P Hunter, also of Middletown, who has headed the association for many years

### Queens County

In the largest turnout in the history of the Queens County Medical Society, Dr Thomas d'Angelo, of Jackson Heights, was chosen president-elect over Dr Jacob Werne of Jamaica, on November 28 Other officers elected were secretary, Dr Chester L Davidson, assistant secretary, Dr Abraham Braunstein, treasurer, Dr Bernard Davidoff, assistant treasurer, Dr Samuel M Klein, historian, Dr W Guernsey Frey, directing librarian, Dr William Benenson, assistant directing librarian, Dr Elmer Kleefeld, delegates, Drs James R Reuling and Joseph Wrana, alternates, Drs Thomas d'Angelo, James Dobbins, and Jacob Werne, trustees, Drs Henry C Eichacker, Frank R. Mazzola, Goodwin Distler, and Joseph Wrana

The censors are Dr Joseph Lanza, first district, Dr John Keating, second district, and Dr David Lothringer, sixth district. Dr Amedeo DePoto was elected censor-at-large.

### New York County

The 134th annual meeting of the Medical Society of the County of New York was held at the New York Academy of Medicine on November 27 These officers were elected for the ensuing year

President-elect, Alfred M Hellman, first vice-president, Maximilian A Ramirez, second vice-president, Vincenzo Fanoni, secretary, B Wallace Hamilton, assistant secretary, William L Wheeler, Jr, treasurer, Kirby Dwight, assistant treasurer, Howard Patterson, Censors (for three years), Conrad Berens, Francis N Kimball, (for two years) Samuel B Burk, chairman, Committee on Legislation, Arthur M Master, chairman, Committee on Public Relations, Ernst P Boas, chairman, Committee on Medical Economics, Bernard S Denzer, chairman, Committee on Membership, Alfred G Forman, trustee (for five years), Howard Fox.

Delegates to the Medical Society of the State of New York (for two years) Walter P Anderson, George Baehr, Emily D Barringer, Edward K. Barsky, Vincenzo Fanoni, Howard Fox, Benjamin Jablons, Samuel M Kaufman, Moses

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by Dr David Kaliski, of the State Society, and Dr S G Feuer, Representative of the Insurance Carriers on the Arbitration Board

### Warren County

Early diagnosis and active intelligent treatment of cancer is the best treatment and one that gives the greatest results, Dr Charles F Geschickter of Baltimore, Md., declared in an address before the Glens Falls Academy of Medicine on November 24 at the Crandall Library. Dr

Geschickter's subject was "Malignancies of the Breast."

Dr Stanton, of Schenectady, opened the discussion by presenting a series of cases which he followed from 1907 to 1926, from the time of operation for cancer and through death. Other physicians who discussed Dr Geschickter's comments were Dr Cummings of Ticonderoga, Dr Irving R. Juster, Dr A W Chapman, Dr E B Probasco, Dr Morris Maslon of Glens Falls, and Dr Felix Schrenck of Chestertown.

## Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Soma Baum	69	N Y Univ	December 7	Manhattan
Morell B Beals	69	N Y Hom	December 5	Manhattan
Charles A Brownell	68	Niagara	November 25	West Falls
Henry O Clauss	68	Bell	December 2	Manhattan
Erwin R Eaton	85	N Y Hom	November 21	Crown Point
Edmund W Fisher	44	Cornell	November 29	Brooklyn
George Flamm	45	L I C Hosp	November 27	Brooklyn
Emil F Kramer	42	Fordham	December 1	Yonkers
John B Lynch	78	N Y Univ	December 2	Manhattan
Frank H Robinson, Jr	28	Duke Univ	November 22	Jamestown
Abraham S Shatz	33	N Y Hom	November 6	Bronx
Walker Washington	79	Bell	December 10	Tottenville
John A Wilson	52	P & S N Y	September 5	Manhattan

### THE DOCTOR'S WIFE

A few weeks ago Dr Rock Sleyster, president of the A M A, addressed the Woman's Auxiliary of the Wisconsin State Medical Association, meeting in Milwaukee, on this interesting subject. He said in part:

"After an experience of some thirty-six years as the husband of a doctor's wife I am appreciative of the fact that no single influence helps to develop and mold the doctor as does his nearest partner in the business and adventure of life. The development of character, of personality, of standards, of ideals, of humanness depends upon her influence as upon no other. And his success and influence in his community depend upon these qualities as much as upon his scientific attainments.

"Nothing—and I say this without the slightest mental reservation—*nothing* is as important in shaping the doctor's career as are his wife and his home. The doctor's wife must share his idealism, appreciate a standard of values held by no other group, and give to him an understanding required of few. Being a doctor's wife is both an art and a career.

"There are many temptations in his professional career which must be met. There is with need at times the temptation to commercialism. With fatigue, there is the urge for relaxation and amusement, at the expense of necessary reading and study that he may bring all that is new to

the bedside of the sick. There is the temptation to be truant to the meetings of his medical or organizations for these same reasons. There is the urge to retaliate and strike back at fancied or actual wrongs at the hands of his colleagues.

There is the opportunity to advance at the expense of others by unfair advantage. In all of these, and in many other circumstances, the temptation will be as great to his wife as to the doctor. She will want material rewards, more rest for him, more of his time and companionship—even more than he—and her whole inclination will be to fight fiercely in his defense. But this cannot be, hers must be the influence to keep his aim at the stars, his purpose unchanged, his ideals in no way lowered, and his character outstanding and above reproach.

"But when the autumn days are here, and the task must be lightened, you will be standing with him in the twilight, as he passes on to younger hands the glory of a professional career above reproach, a career perhaps without material reward but a career good and clean and true to all the teachings of a great physician who came to us from Galilee. And as you stand hand in hand and look back over the years, there will be the joy and satisfaction of hearing him say—'You were my partner—it was possible only because of you.'"

# Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

## Two Interesting Wills

THE article of the Penal Law of the State of New York entitled "Sepulture" has for many years provided that an individual has the right to direct the manner in which his body shall be disposed of after death. Recently two proceedings dealing with the interpretation of that principle have been brought before the surrogates of different counties in New York City, and the manner in which those courts dealt with the problems presented is of interest.

In the first case,\* the petitioner sought to have admitted to probate documents purporting to be a will and codicil which had been executed with the usual technical formalities by one M. J. as testatrix. The material provisions were to the effect that the testatrix "being of sound mind and in full possession of my senses and for no thought of remuneration but purely out of the largeness of my heart and a keen desire to help, if possible, the cause of science, do hereby bequeath my body for the purposes of medical research. Such research is to be conducted under the direction, either jointly or singly of J. A. C.—M. D., and H. A.—M. D., at present both of the City of New York and the Harkness Pavilion. It is my wish that my body be cremated in the simplest form and without grass."

The court in the case reviewed numerous older authorities and concluded that the papers in question should be admitted to probate as the will of M. J.

The surrogate stated in his opinion as a preliminary proposition:

Probate courts do not exclude from an admitted instrument matter which is itself not dispositive provided the instrument otherwise contains dispositive provisions or provides for the appointment of an executor. The views of testators on mundane and celestial affairs (so long as not libelous or scandalous) are ordinarily recorded as part of the testamentary instrument. The courts decline, however, to probate instruments which contain neither dispositive provisions nor executorial appointment. The question presented by this petition and by the tender of the instruments now before the court is whether a paper purporting to dispose of a dead body only is a testamentary instrument and hence entitled to probate."

The question of the right to make directions as to the disposition of one's body by will was discussed in part as follows:

"There was an outpouring in the nineteenth century of court decisions on the question of whether there is any property in a corpse. This was the outcome mainly of three distinct and unrelated causes. As a result of loosened family ties it sometimes happened that a man's widow

and 'next of kin' contested for the control of the deceased's body for purposes of burial. The courts were obliged to consider whether there are rights in or to a corpse and whether a corpse is in any sense property. The rise of medical schools, the increase in the number of doctors and the recognition in medical circles of the need for knowledge of the human body based on the art of dissection resulted in unauthorized autopsies, and body-snatching from graveyards. (Parenthetically it may be noted that this factor in one celebrated instance occasioned the development of a business in homicide carried on by two enterprising murderers named Burke and Hare who, obeying the law of supply and demand, provided eager doctors with what they greatly needed but could not legally obtain in sufficient quantity. It was thus that the verb 'to burke'—meaning to kill by suffocation—entered our language.) Unauthorized dissections of dead bodies resulted in suits for damages by aggrieved next of kin and the courts were obliged to determine whether there was property in a dead body. Lastly, interment ceased gradually to be the universal method for disposing of the dead. When testators directed cremation of their remains some of their next of kin, out of religious or other considerations, challenged the right in the deceased to direct that such disposition should be made of his corpse."

"For these reasons a considerable body of case law developed. The majority of the courts plainly held that a testator might use his will to give binding directions respecting the disposition of his remains."

In conclusion the court stated:

"Historically she has performed an act of testamentation giving directions respecting her body. Since the directions contravene no statute and are consistent with the proprieties there is no reason why the directions may not be given effect. Specifically there is no reason why the instrument may not be probated as a means of giving effect to her wishes."

The situation presented in the second proceeding was somewhat different.† The decedent had died leaving a will and two codicils which were duly admitted to probate. They provided in addition to directing the manner of disposing of her possessions that the sum of \$1,200 should be expended for the purpose of transporting her body to Palestine, and for burial there. It seems that at the time of her death the children, being in ignorance of these directions, had caused her interment in a cemetery in this state, spending for the purpose about \$200.

Upon an accounting proceeding, the distributees of the estate unanimously sought the approval of the surrogate to leaving her remains undisturbed. Certain affidavits were submitted, two of which were by rabbis (the deceased being

\* Matter of Johnson. 169 Misc. 215.

† Matter of Scheck. 172 Misc. 236.

of the Jewish faith) to the effect that to disinter the body and remove it to Palestine would be contrary to Jewish tenets and Hebrew laws. The affidavits of certain members of the family tended to prove that at the time the testamentary instruments were drawn the decedent was living in Palestine and making payments on a burial plot in that country. It was shown that she subsequently left Palestine, returned to this country, discontinued the said payments, and instead started payments on the burial plot in which her remains were actually placed. She was said by those relatives to have before her death expressed wishes to be buried in the latter plot.

The surrogate in this case, while recognizing the right of an individual to dispose of his body by will, determined that since such a testamentary provision is not a disposition of actual "property" it could be refuted in a proper case by outside proof in a manner in which testamentary provisions concerning the disposition of monies, for instance, could not be refuted.

In so deciding the surrogate said in part in his opinion

" a direction in a will respecting disposal of the body of the testator is not testamentary in character to a degree which would require revocation of the direction to be accomplished in the manner prescribed in section 34 of the Decedent Estate Law. As noted, a dead body is not properly viewable as property or assets, and since time immemorial it has been the settled law in all common-law jurisdictions that a will is 'the affirmative expression of intent of the testator respecting the administration and disposition of his material possessions upon his death' "

The surrogate stated that a direction concerning disposition of the body of a deceased person "is not testamentary in character and is not in any particular, either as to initial insertion, or subsequent revocation, to be governed by the ordinary rules relating to strictly testamentary directions. An inevitable sequence of this conception is the right of a particular decedent, from time to time in his discretion, to vary the directions respecting disposal of his remains, with the result that the inquiry of the court must be directed to the ascertainment of the latest expression of wish by the testator on the subject."

## Retained Secundines

A WOMAN thirty years of age, having previously been delivered of one child, consulted an obstetrician in her eighth month of pregnancy and made arrangements for him to care for her confinement and delivery. Examination showed the condition of the patient to be in all respects normal and upon subsequent examination, three or four weeks later, her condition again was satisfactory.

The next time the doctor saw the patient a vaginal examination showed that the patient was two fingers dilated and that the head was engaged. The patient was not in labor. After further examination the physician concluded that the woman had a uterine inertia and that induction was needed to start labor.

The patient was hospitalized and the first stage of labor began the following day, lasting about five hours. Shortly thereafter the physician determined that a forceps delivery was indicated and performed an episiotomy and with low forceps delivered a normal female child. The placenta was expelled and upon examination both by the doctor and by the assisting nurse it appeared to be intact. After delivery the patient ran a normal course and left the hospital in eleven days.

It seems that about a week following the return of the patient to her home, she called another physician who found her suffering from vaginal bleeding, which developed into a profuse hemorrhage. Said physician took the woman to a hospital where a diagnosis of retained secundines was made and a dilatation and curettage was done, removing some pieces of placental tissue. A blood transfusion was administered. Following this the patient promptly regained her health.

A malpractice action was instituted on behalf of the patient charging that the defendant doctor had so negligently conducted himself in delivering the plaintiff that he improperly caused certain portions of placental tissue to remain within her body, causing her to sustain severe injuries.

The case was placed upon the calendar for trial but never actually brought to trial by the plaintiff's attorney, and was finally terminated by a motion to dismiss for lack of prosecution, which was granted by the court.

## DICKENS AND THE DOCTORS

A book is out on *Doctors, Nurses and Dickens*, by Robert D. Neely, published in Boston by the Christopher Publishing House, in which the author has selected those passages from Dickens' books which treat of medicine, the doctor and his variety of assistants, such as nurses, interns, students, and finally undertakers. It is not only a pleasant intermezzo of medicine as studied by Dickens in relation to all strata of society but a delightful picture of Dickens' own life, troubles and vicissitudes, says the *New England Journal of Medicine*. To one who reads the book it will give not only a most pleasant and warm evening but considerable food for thought.

For instance, the sayings of Esther Summerson, the heroine of *Bleak House*, after her marriage to Dr. Allan Woodcourt, show in what high regard Dickens held the medical profession. She says "I never walk out with my husband, but I hear the people bless him. I never go into a house of any degree, but I hear his praises, or see them in grateful eyes. I never lie down at night, but I know that in the course of that day he has alleviated pain, and soothed some fellow-creature in the time of need. I know that from the beds of those who were past recovery, thanks have often, often gone up in the last hour, for his patient ministrations. Is not this to be rich?"

# The Woman's Auxiliary

To the Medical Society of the State of New York

## County News

### Cayuga County

The Woman's Auxiliary held its annual meeting December 14 at the Osborne Hotel. The following officers were elected: Mrs G C. Sincerbeaux, president; Mrs J D Sands, first vice-president; Mrs W L Dorr, second vice-president; Mrs S J Karpenski, recording secretary; Mrs W H Havill, corresponding secretary; Mrs F L Okoniewski, treasurer. At the close of the short business meeting, the auxiliary members joined the members of the Medical Society for a Christmas dinner party. The guest speaker of the evening was Dr Milledge I Bonham, Jr., professor of history at Hamilton College, Clinton, New York, whose subject was "American-Canadian Relations."

### Columbia County

At the annual meeting of the Woman's Auxiliary the following officers were elected: president, Mrs W D Collins, Hudson; president-elect, Mrs R L Bowerhan, Copake; first vice-president, Mrs H A Pattison, Livingston; second vice-president, Mrs L J Shank, Kinderhook; recording secretary, Mrs C F Nichols, Philmont; corresponding secretary, Mrs O H Bradley, Hudson; treasurer, Mrs H G Henry, Germantown. Following the business meeting a card party was held. A portion of the proceeds was sent to the Physicians' Home.

### Fulton County

On November 21, at the Hotel Johnston, Johnston, New York, the Woman's Auxiliary was organized. Every part of the county was represented at the dinner preceding the meeting. The following officers were elected: president, Mrs B G McKillip, Gloversville; president-elect, Mrs J E Grant, Northville; first vice-president, Mrs J Shannon, Johnstown; second vice-president, Mrs W R Gruenwald, Mayfield; secretary, Mrs B E Chapman, Broadalbin; treasurer, Mrs W Kennedy, Gloversville; corresponding secretary, Mrs. B A. Winne, Johnstown.

The first regular meeting of the new auxiliary was held December 21.

### Kings County

The Kings County Woman's Auxiliary held a benefit bridge party in December at the homes of Mrs Fisher and Mrs Beinfeld. The proceeds of the affair were donated to the Physicians' Home.

### Onondaga County

The Woman's Auxiliary to the Onondaga County Medical Society held its annual meeting in December at the home of Mrs F J O'Connor. Annual reports were read by officers and committee chairmen. The following officers were elected for the coming year: president, Mrs E M Neptune, vice-presidents, Mrs W W Street and Mrs L E Gibson, recording secretary, Mrs G C Murdock, corresponding secretary, Mrs J G Derr, assistant corresponding secretary, Mrs R. E Fenner, directors, Mrs W Pennock, and Mrs Francis Irving.

### Orange County

The Woman's Auxiliary held its annual luncheon meeting December 6 at Middletown, New York. Reports given by each chairman of standing committees showed that it had been a very active year, the high light being the Health Institute held in May. New officers elected for the coming year were: president, Mrs F W Seward, Goshen; president-elect, Mrs H F Murray, Port Jervis; vice-president, Mrs J W McKeever, Newburgh; recording secretary, Mrs C S McMillan, Newburgh; treasurer, Mrs J F Ross, Montgomery.

### Schenectady County

The Woman's Auxiliary recently held a luncheon and bridge party at Newman's Lake House, Saratoga Lake. Mrs G Scott Towne, State Auxiliary president, was the guest of honor.

## "THE NATURE OF OBESITY"

The Cornell Medical College chapter of Nu Sigma Nu fraternity is sponsoring a lecture entitled "The Nature of Obesity" to be presented in the auditorium of the Cornell Medical College on Wednesday, December 13, at 8 00 P.M. by Dr David P Barr.

Dr Barr, Professor of Medicine at the Washington University School of Medicine in St. Louis, is a well-known authority in the field of endocrinology.

The lecture will be open to all those interested.

## YIELDING TO THE MAJORITY

A Philadelphia physician, in declaring that insanity was frequently productive of sound logic tempered with wit, told the story of a patient he once met in an asylum.

He came across this patient while strolling through the grounds, and, stopping, spoke to him "Why are you here?"

"Simply a difference of opinion," replied the patient. "I said all men were mad, and all men said I was mad—and the majority won"—  
*Leppincott's*

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn N Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers

## RECEIVED

**A Guide to Workmen's Compensation. The Law and Its Practice in New York State** By H D Margulies and Max Bloom Duodecimo of 96 pages New York, Progress Books, 1939 Paper, \$0 50

This guide, written by H D Margulies and Max Bloom, labor attorneys practicing before the Workmen's Compensation Board, offers to the physician in brief form a convenient and comprehensive source of information regarding the medicolegal aspects of the law of Workmen's Compensation

Physicians authorized to treat injuries resulting from industrial accidents, need a quick guide for determining whether a particular case is compensable This, as we know, determines the liability of the employer or his carrier for the payment of medical fees

Information on these and other topics can be found in the sections entitled "Occupations Covered," "Medical Treatment and Care," "Schedule Losses," "Occupational Diseases," "Practice and Procedure," "Medical Evidence," and "Selected Rules for Physicians"

As a first guide on workmen's compensation in the State of New York, this book fills a long-felt need for a popular interpretation of a highly specialized study It is very handy and useful in compensation work

SAMUEL M KAUFMAN

**Psychopathic States.** By D K Henderson, M D Octavo of 178 pages New York, W W Norton & Co, Inc, 1939 Cloth, \$2 00

This volume includes the Thomas W Salmon Memorial Lectures given in 1938 by Dr Henderson, who is professor of psychiatry at the University of Edinburgh, and physician-superintendent of the Royal Edinburgh Hospital for Nervous and Mental Disorders

The author brings into these lectures a wealth of practical experience in studying and treating varying degrees of psychopathic states, both in the United States and abroad When one considers the widespread social disruption caused by this type of social deviate, Dr Henderson has rendered a signal service not only to the medical profession, but to society in clarifying the problems and needs of this most perplexing disruptive member of our social order

In a scholarly fashion Dr Henderson interprets the term "psychopath" and suggests a practical classification of different types These are well illustrated by critically selected case histories The work is divided into three chapters Place in Psychiatry, Clinical Manifestations, and Social Rehabilitation It is rounded out with pertinent references and an adequate index

This book is of inestimable import, and should be within arm's reach of every psychiatrist, as

well as psychologist, social worker, sociologist, penologist, educator, and intelligent layman.

FREDERICK L PATRY

**Practical Dermatology and Syphilis** By Harry M Robinson, M D Octavo of 397 pages, illustrated Philadelphia, P Blakiston's Son & Co, 1939 Cloth, \$4 50

Doctor Robinson has succeeded in producing the most concise, most up-to-date and best illustrated handy volume on his subjects that it has been our pleasure to examine in many a day Few of the larger works on dermatology and syphilis can boast of more instructive or elucidative illustrations than the 439 which he has selected with great care to help the student and to assist the busy general practitioner in making his diagnosis

This is a new book of practical procedures for the diagnosis and treatment of the commoner skin diseases and syphilis Clinical diagnosis is taught from two standpoints the morphology of primary and secondary lesions, and their distribution The simplification of dermatologic nomenclature is aided by listing such clinical syndromes as urticaria, erythema multiforme, pityriasis rubra, eczema, rosacea, etc, as clinical or diagnostic entities

Dr Robinson is to be congratulated on the preparation of a work which sets a standard for other authors to emulate. The reader is presented with a most comprehensive atlas of excellent pictures and a description of the etiology, differential diagnosis, and latest approved treatment for each disease

NATHAN T BEERS

**Doctor, Here's Your Hat! The Autobiography of a Family Doctor** By Joseph A Jerger, M D Octavo of 279 pages New York, Prentice-Hall, Inc, 1939 Cloth, \$2 75

The title of the book finds its explanation in the feeling of the author that "superspecialism" is handing the family doctor his hat and showing him the door The subtitle might more appropriately be worded, "the autobiography of a general specialist," as the doctor calls himself on signing a contract with the landlord of his new apartment, after he finally arrives professionally in Chicago

This book is the biography of a man whose personal and medical history is well beyond the ordinary Born in England, visiting many strange places as a boy, taken early in life to live in Australia, he comes to America to study medicine at the suggestion of Mark Twain, whom he meets on a voyage from South Africa to England He becomes an American citizen. After an internship in Chicago, with the assistance of Dr Nicholas Senn, he enters into a partnership with "Old Doc" Fullerton in Waterloo, Iowa

Dr Fullerton is a successful country practitioner

and evidently not only a good doctor but a fine character. He is given ample credit for the training and development of his assistant. Under the tutelage of his wise and capable preceptor, the author lives a busy and profitable life as a general practitioner with a rapidly developing aptitude for surgery. He tells many interesting tales. As might be expected, many of the reported cases illustrate the intuition and diagnostic sagacity of the general practitioner and the befuddlement of the superspecialist. We will say for the author that wherever he went, he went to learn, and so his knowledge is exceptional.

While working with "Old Doc" Fullerton, the importance of the clinical aspects of a case is stressed. Later in the book, he introduces a three-page dissertation on approved modern methods of diagnosis and treatment. That these methods are not always 100 per cent efficient, and that their overemphasis may lead to superspecialism and occasional abuse in no way nullifies their help to the patient as well as to the doctor. The author's discussions of the economic, social, and ethical aspects of medicine would naturally follow in a book with such a title.

JOSEPH RAPHAEL

**Everyday Surgery** By Lambert Rogers, F.R.C.S., and A. L. D'Abreu, F.R.C.S. Octavo of 280 pages, illustrated. Baltimore, William Wood & Co., 1938. Cloth, \$4.75.

This small volume provides an excellent summary of surgical procedure for the student preparing for examination, but its value to the surgeon is less evident.

As exponents of everyday surgery, the authors include all subjects excepting only diseases of women, and those of the eye, ear, nose, and throat. All other surgical procedure is covered in 266 pages, and discussion of clinical features and other detail is of necessity quite brief.

Within their limited space the authors have produced a volume useful and interesting to those for whom it was written. The type is clear and the book of convenient size for reading.

STANLEY B. THOMAS

**Chemistry in Relation to Biology and Medicine with Especial Reference to Insulin and Other Hormones** The Willard Gibbs Lecture by John Jacob Abel. Octavo of 79 pages. Baltimore, The Williams & Wilkins Co., 1938. Cloth.

This beautifully printed little volume is a worthy tribute to Professor Abel and to the publishing house, the impress of which it bears. Dr. E. K. Marshall contributes an introduction to the Willard Gibbs Lecture of 1927, which constitutes the body of the book. In this he discusses briefly Dr. Abel's many contributions to medical sciences, and enumerates many of the collaborators who distinguished themselves by working with this great investigator. In 1909, when he founded the *Journal of Pharmacology and Experimental Therapeutics*, Dr. Abel was instrumental in starting the medical publication division of The Williams and Wilkins Company, which has since had a splendid career as one of several great medical publishing houses to which the American medical profession is con-

stantly indebted. Nothing further need be said regarding the Gibbs Lecture itself, which has a secure niche in medical history. It will repay rereading.

MILTON PLOTZ

**The Abnormal in Obstetrics** By Sir Comyns Berkeley, M.D., Victor Bonney, M.D., and Douglas MacLeod, M.B. Octavo of 525 pages. Baltimore, William Wood & Co., 1938. Cloth \$6.00.

These three well-known English authors have enriched our obstetric literature by including in one small volume the entire range of obstetrics, commencing with sterility, the hormones, and the disorders of every tissue and organ that are likely to occur during pregnancy, to all complications of labor and the puerperium. There are special chapters on diseases and injuries of the newborn, blood transfusion and other intravenous therapy, analgesia and anesthesia, specific affections and contagious diseases, and mental disorders associated with childbearing.

Bleedings and infections, the most frequent and dangerous complications in obstetrics, are exhaustively covered. The authors' views are conservative, authoritative, and timely. They conform well to the best views on this side of the ocean.

Naturally, some of the methods employed in England are not in vogue in this country, for example, intrauterine douching for postpartum hemorrhage is stressed as an excellent measure, and is mentioned repeatedly in several chapters. On the other hand, intrauterine packing for the same condition is not advised. Vaginal douching, daily or at less frequent intervals, is advised in all forms of postpartum infections.

With the exception of a few simple line drawings depicting the technique of transfusion, the book is not illustrated.

Indeed, if it were not for that, it would have been well nigh impossible to cover such an extensive range of subjects and pack so much valuable information in a small volume.

The book is highly recommended, not only to those actively engaged in obstetric practice, but even to those who have only on occasion to refer to some subject relating to it.

JACOB HALPERIN

**Orthopedic Appliances** *The Principles and Practice of Brace Construction for the Use of Orthopedic Surgeons and Bracemakers* By Henry H. Jordan, M.D. Octavo of 412 pages, illustrated. New York, Oxford University Press, 1938. Cloth, \$4.00.

The need for such a text was imperative for the orthopedist. While books on orthopedic surgery, traumatic surgery, and fractures give a slight glimpse into the mechanical phase of supporting the distorted framework of the human body, this author describes in detail the fitting of braces and supports to the deformity present. Emphasis is placed on the need of brace shop training (apprenticeship) as a fundamental need in orthopedic surgery.

The first four chapters are devoted to the use of the plaster of Paris bandage and the making of plaster molds for spinal and low-back defects. From these molds the various types of corrective and supportive appliances are fashioned.

according to the dictates of the attending orthopedist. Too often the application of a support or brace is left in the hands of the brace-maker who does not understand the underlying mechanical defect and pathology, but rather is interested in the financial remuneration to be received by the addition of unnecessary gadgets and details of completion.

The basic requirements for efficient brace making is discussed, viz (1) correct medical indication, (2) scientific brace construction, (3) good workmanship, (4) high grade material, (5) careful fitting, and (6) intelligent use by the patient.

The names of all the important appliances and braces are given, illustrated, and described in detail, so that there is no doubt in the brace-maker's mind what the orthopedist wishes prescribed.

A knowledge of the contents of this book is helpful in the better caring for the physically handicapped.

JOSEPH I NEVINS

**Whitla's Dictionary of Treatment.** Including Medical and Surgical Therapeutics Eighth edition by R. S. Allison, M D, and C. A. Calvert, M B. Octavo of 1,285 pages. Baltimore, William Wood & Co, 1939. Cloth, \$9 00.

This volume of nearly 1,300 pages of both medical and surgical conditions with treatment is a useful book for reference. Subjects and diseases are alphabetically given and the treatment is that of the present time. It is inclusive, well written, and accurate. This type of publication is not valuable as a book of instruction or as a textbook, but can be advantageously used for reference.

HENRY M. MOSES

**A Synopsis of Medicine.** By Henry Letheby Tidy, M D. Seventh edition. Duodecimo of 1,187 pages. Baltimore, William Wood & Co, 1939. Cloth, \$6 00.

Seven editions and three reprinting demands for this useful synopsis and presentation of the subject of medicine attests the value of this book. So rapid has been the advance in the science of medicine that this seventh edition has had many additions incorporated—too many to enumerate. The book is divided into thirteen sections of diseases of various types with subdivisions. It is encyclopedic in arrangement, accurate, inclusive, terse, and presents all important facts. It is a most handy and reliable volume for study and reference.

HENRY M. MOSES

**Refraction of the Human Eye and Methods of Estimating the Refraction.** By James Thorington, M D. Third edition. Octavo of 412 pages, illustrated. Philadelphia, P. Blakiston's Son & Co, 1939. Cloth, \$3 50.

In presenting the third edition of his father's well-known work on refraction, Dr J. Monroe Thorington has wisely retained much of the original text, which was prepared with such meticulous care many years ago that it is still the standard book on the subject in America.

The treatment of the subject of optics and the description of prisms and lenses and their actions are handled in a way that is clear to the beginner and to those who have difficulty with mathe-

matics. (At the same time the matter is covered so thoroughly that the student is left with a clear conception of the subject.)

Practical refraction with and without cycloplegics, the use of the ophthalmoscope, retinoscope, and other aids are set forth briefly but without any sacrifice of details. The chapters on the action of the extrinsic ocular muscles and their abnormalities, the various phorias and tropias, and methods of treatment leave little to be desired.

Orthoptic training, telescopic, and contact lenses have been included in this edition, so that the work is entirely up-to-date.

This is an ideal textbook for the student, and it belongs in the library of all who refract.

WALTER V. MOORE

**The Essentials of Modern Surgery.** Edited by R. M. Handfield-Jones, M C, and A. E. Porritt, M A. Quarto of 1,126 pages, illustrated. Baltimore, William Wood & Co, 1938. Cloth, \$9 00.

This textbook of surgery represents the contributions of fifteen English surgeons who have taken part in the presentation of the material included in the book. There are 47 chapters and an index at the end. The chapters cover the whole realm of surgery. The principles of anatomy, physiology, and pathology are stressed. The details of operative treatment are not included. The nature of the treatment, however, is given. Many of the contributors are specialists in the subjects they present. The text is abundantly illustrated with x-ray negatives, photographs of surgical conditions, and drawings. The text and illustrations make the book attractive, and the volume in general is comprehensive but still sufficiently concise for the use of the student and the young graduate in surgery, and for them it is recommended.

EMIL GOETSCH

**The Diagnosis and Treatment of Diseases of the Thyroid.** By James H. Means, M D, and Edward P. Richardson, M D. (Reprinted from Oxford Monographs on Diagnosis and Treatment.) Octavo of 387 pages, illustrated. New York, Oxford University Press, 1938. Cloth, \$5 00.

This book is divided into nine chapters covering Historical Considerations, Functions and Diseases, Principles Underlying the Diagnosis and Treatment, Colloid, Exophthalmic and Adenomatous Goitre, Myxoedema and Cretinism, Malignant Tumors, and Inflammations of the Thyroid. The text is based largely upon the experience of the authors in the medical treatment per se, and the medical therapy associated with the surgical treatment of diseases of the thyroid.

Illustrative cases are appended to almost every chapter. Careful follow-up studies have been done and ultimate results are freely discussed. The book is recommended particularly for the presentation of the medical man's point of view of the care of thyroid patients. However, the surgical treatment does receive adequate presentation. There are many charts to illustrate the text. It would be desirable to have more of the pathology presented, but the book was primarily intended for the presentation of the clinical aspects. The text is readable and

interesting. A comprehensive bibliography is appended to each chapter and there is a full index. The book is recommended particularly for physicians, but should also be valuable to surgeons treating thyroid diseases.

EMIL GOETSCH

**Pastoral Psychiatry** By John S. Bonnell. Octavo of 237 pages. New York, Harper & Bros., 1938. Cloth, \$2.50.

From time immemorial religion has had a strong influence on human behavior. One need but observe the thousands of people entering and leaving churches on a Sunday morning in any part of any civilized community to realize the potent influence that it exerts on human beings and their conduct. Many a minister has helped his parishioners to pass through emotional crises.

The author of the book under discussion is a minister whose early childhood and adolescent experiences and training have uniquely qualified him as a healer of mental ills. His father was an attendant in a mental hospital and the author spent many a day accompanying his father on his rounds. Moreover, he, too, has served for a short time as an attendant in that institution. A psychotic patient helped him with his studies in preparation for college entrance examinations.

As the author says: "The physician works with the body, the psychiatrist with the mind, and the pastor with the soul. But soul, mind, and body act and react upon each other. The body influences the mind, the mind reacts upon the body, and the health or unhealth of the soul will have a determining influence on both mind and body. Many disorders of the body and mind are due to maladies of the soul with which only a spiritual ministry is equipped to deal."

Many a physician has recognized the minister as an ally in the fight against diseases.

The book is both interesting and instructive. The technique of psychotherapy practiced by the author, as evidenced by the descriptions of typical conversations with parishioners and his methods of dealing with their problems, extends beyond the horizon of medical psychiatry but will win the approval of the intelligent physician and psychiatrist. The book is written in a highly sympathetic tone by an inspired and gifted minister, and should find a wide circulation among intelligent and cultured people.

IRVING J. SANDS

**Outline of Psychiatric Case-Study. A Practical Handbook.** By Paul W. Preu, M.D. Duodecimo of 140 pages. New York, Paul B. Hoeber, Inc., 1939. Cloth, \$1.85.

Although there are available a number of "outlines," of psychiatric case-study methodology, the present volume under review is by far the most comprehensive. It is essentially formulated by Dr. Preu, but represents the point of view of the Department of Psychiatry and Mental Hygiene of the Yale University School of Medicine, which is under the leadership of Dr. Eugene Kahn.

The content of this handy-sized publication contains only that material that has been tested over a number of years by virtue of practical application at the New Haven Clinic as well as other important centers.

Of particular value will be its usefulness in the training of house officers and psychiatrists-in-training in learning the essentials of the technique of psychiatric history-taking and mental examination. The book is highly recommended.

FREDERICK L. PATRY

**A Textbook of Neuro-Radiology** By Cecil P. G. Wakeley, F.R.C.S., and Alexander Orley, M.D. Quarto of 336 pages, illustrated. Baltimore, William Wood & Co., 1938. Cloth, \$8.00.

This is an illustrated treatise of 296 pages with an appended bibliography of 29 pages, purporting to include in a single text the present-day knowledge concerning abnormal findings disclosed by roentgen-ray examination in certain diseases of the central nervous system and its coverings. Although the many subjects considered are discussed under separate captions, the facts presented are primarily concerned with information derived from a study of plain roentgen-ray films of the head and spine, and that derived from films taken after the introduction of contrast media into the intracranial and intraspinal spaces (air, lipiodol and thorotrast). Methods of technique are described. The textbook should be of considerable value to those practicing general radiology.

E. JEFFERSON BROWDER

**Angina Pectoris. Nerve Pathways, Physiology, Symptomatology, and Treatment.** By Heyman R. Miller, M.D. Octavo of 275 pages, illustrated. Baltimore, The Williams & Wilkins Co., 1939. Cloth, \$3.25.

In this well-printed volume the author essays a restatement and analysis of the character of angina pectoris. He presents a graphic delineation of the pathways of cardiac pain, with 38 illustrative drawings in collaboration with L. Lyons Vosburgh.

Decrying the use of the terms "false angina" and "pseudoangina," he quotes Potain (1880) to the effect that "there are no false diseases, but there are only false diagnoses."

It is not apparent at first that coronary occlusion is included in his survey, but we find that all pain from coronary mishap to psychoneurosis is grouped for consideration under his title. He considers angina pectoris as an "effect of mass action of the whole autonomic system" "a paroxysmal upheaval," sympathetic and vagal.

The book is an interesting one. Clinical comments are well presented. That the severity of cardiac pain is not a measure of pathologic changes is stressed, and there is a splendid review of the simulation of anginal pain by non-cardiac diseases.

The views of Head and Mackenzie in regard to the viscerosensory reflex are questioned and criticized.

Seventy pages are devoted to treatment, medical and surgical, of the anginal syndrome, organic and otherwise. Details are given with critical comments. The text is naturally a few months behind the later work of Claude Beck and the work of O'Shaughnessy of London.

The bibliographies are a delight and one easily finds therein the references often sought when memory fails and memoranda are mislaid.

FRANK B. CROSS



**You and Heredity** By Amram Scheinfeld assisted in the genetic sections by Dr Morton D Schweitzer Octavo of 434 pages, illustrated New York, Frederick A Stokes Co, 1939 Cloth, \$3 75

This book is written from the viewpoint of a reporter who obtained information concerning the general field from those working in it

The style of the author is extremely interesting Each chapter presents specific subject matter profusely illustrated with drawings Such topics as the division of the chromosomes, the determination of sex, and specific traits such as the color of the eyes and hair, are presented Particularly interesting to the reviewer was a discussion on musical talent which was an original genetic study carried out by the author Also of interest were the summary tables of what the author calls "black genes" In these there is an attempt to forecast the chances of transmission of any given defect, disease or abnormality, to a child The disease processes such as rheumatism, diabetes, eye pathology, ear abnormalities, skeletal defects, etc, are presented in detail with the possibilities of their transmission Finally, there is a discussion of race, ancestry, and eugenics with a program for the future

The book contains in its appendix a chart of the high lights in the history of genetics and a very good bibliography for further reading on the subject The reviewer commends this book highly, and feels that it will be interesting reading for any member of the profession

STANLEY S LAMM

**Handbook of the Vaccine Treatment of Chronic Rheumatic Diseases** By H Warren Crowe, M.R.C.S Third edition Octavo of 95 pages New York, Oxford University Press, 1939 Paper, \$1 25

This small book is a concise, practical, and clear exposition of vaccine treatment of chronic rheumatic diseases as practiced under the direction of Dr Crowe While a number of the premises expressed may be at variance with those presently in common vogue, it behooves every practitioner delving into the vaccine treatment of "chronic arthritis" to be cognizant of this monumental little treatise The reviewer specifies "chronic arthritis," for in his opinion this group of diseases constitutes a unique immunologic entity, with implications from the treatment viewpoint which are not duplicated in other diseases treated by vaccine.

Dr Crowe's success with vaccine treatment hinges on the meticulous care with which dosage is regulated, the scrupulous avoidance of reactions and adherence to the principle of small dosage and clinging to the "optimal dose" for the individual The administration of ten thousand or one thousand organisms approaches the mythical in the eyes of those who start with five or ten or one hundred million, it nevertheless seems to be borne out by statistics that most authorities claiming failure with vaccine therapy are to be listed among the exponents of large dosage Whether one uses vaccines, filtrates, or other bacterial products in this group of diseases, and whether or not one feels that the *modus operandi* is as expounded, the principles put forth by Crowe are the *sine qua non* of success with any bacterin treatment.

GEORGE E ANDERSON

**The New International Clinics.** Original Contributions Clinics, and Evaluated Reviews of Current Advances in the Medical Arts. Edited by George M Piersol, M D Volume IV, New Series One Octavo of 349 pages, illustrated Philadelphia, J B Lippincott Co, 1938 Cloth, \$3 00

Many important phases of medicine and surgery are covered in this number of the International Clinics Jolliffe, of Bellevue, reviews the more significant features of vitamin B<sub>12</sub>, as applied to the American diet. There is a comprehensive study of all the various types of hypertension by Held and Goldbloom Kaltreider, of Rochester, New York, presents an excellent summary of the difficulties frequently encountered in attempting to differentiate between pulmonary and cardiac insufficiency in chronic pulmonary disease He emphasizes the importance of laboratory aids The volume includes several interesting pages on endocrine problems, functional colonic disorders, and prolapse of the rectum

ANDREW M BABEY

**Manual of Roentgenological Technique** By L R Sante, M D Sixth edition Octavo of 253 pages, illustrated Ann Arbor, Edwards Bros, Inc, 1939 Cloth, \$4 50

This book is another excellent example of a most useful type of reference and textbook printed by the photo-lithographic method This method of printing and reproduction of photographs is just as satisfactory as other more commonly used methods, and has the very distinct advantage of reducing the cost far below that which would be necessary by any other method

The subject matter, arranged in a simple manner, is complete and well classified for easy reference With all its simplicity there is a wealth of essential detail which makes this an outstanding work in its field

A L L BELL

**End-Results in the Treatment of Gastric Cancer** An Analytic Study and Statistical Survey of Sixty Years of Surgical Treatment. By Edward M Livingston, M D, and George T Pack, M D Quarto of 179 pages, illustrated New York, Paul B Hoeber, Inc, 1939 Cloth, \$3 00

This text is a statistical study of gastric cancer over a period of sixty years The stomach occupies a most important position from the standpoint of initial cancer The figures should be both important and instructive. Needless to say they have discovered a much higher incidence of operable carcinoma than has been reported on the side of the chart which is concerned with the operative cases In other words, the conclusion reached is that there are thousands of patients who are being denied the benefits of surgery In their analysis this is capable of correction Team work and a more careful study of gastric cases would increase the number of successful operative cases

This monograph is not fatiguing because of statistics The lesson learned from the statistics has been mentioned For both the student and the teacher it should prove an important reference on gastric cancer

ROBERT F BARBER

# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

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### Untimely and Undesirable

The American Association for Social Security will make a strong effort to force its compulsory health insurance bill through the current session of the New York State Legislature. Apparently the advocates of this system fear that if voluntary medical expense indemnity insurance succeeds, their scheme is doomed. They would like to rush their program through before voluntary insurance has had a chance to prove its worth.

The present moment is singularly inopportune for the adoption of a controversial measure like compulsory sickness insurance. For one thing, as stated above, the country has embarked on its first important trial of voluntary insurance. If the voluntary insurance works, it would provide all of the alleged benefits of compulsory insurance without its disadvantages. It is obviously the part of common sense to give noncontroversial voluntary methods a chance before resorting to compulsion. Falling morbidity and mortality rates show that there is no emergency to justify sabotaging the experiment in voluntary insurance in favor of a compulsory contributory system.

Apart from the comparative merits of compulsory and voluntary insurance, however, there are strong reasons for rejecting the bill proposed by the American Association for Social Security. Governmental economy is essential to the preservation of the American system. The government cannot evade its obligation to provide adequate medical service to the indigent. There is no necessity for it to undertake the financial burden of compulsory sickness insurance in behalf of the middle class, when voluntary plans are being adopted all over the country to supply the needs of this very group.

Not the least among the arguments against compulsory sickness insurance is its threat to personal independence. The vast political

bureaucracy, which experience has shown to be an inevitable concomitant of obligatory sickness insurance, is an instrument of pressure against the layman as well as the medical profession. New York and every other state should think twice before loading its citizens with oppressive new taxation and bureaucratic controls for a scheme that has nowhere fulfilled the promises held out for it.

### Wise Distribution

The policy enunciated by the New York State Association of School Physicians preserves an equitable balance between the school doctor, the health officer, and the private practitioner. The interests and duties of each are wisely defined and prescribed.

School health services aim to create a wholesome sanitary environment, to disseminate authentic health information, to build up sound health practices, and to provide first aid to teachers and pupils in accidents and emergencies. The school physician should see that every child has a thorough annual examination and that defects found are corrected; he should issue regulations governing light, heat, ventilation, and cleanliness and take all necessary steps to prevent the spread of communicable disease. Essentially, however, his role is executive and educational; the school should not maintain clinics nor provide treatment.

On the private practitioner falls the duty of performing the annual medical examination, correcting any defects discovered and providing immunization. The family doctor's knowledge of his patients is an invaluable asset in the performance of the health examinations, provided, of course, that this knowledge is not made an excuse for casual inspection and certification. The examination should be painstaking and complete and follow the course laid out by the Department of Education.

Should the family doctor fail to provide immunization, the Health Department may rightfully step in. Likewise, the school physician may take the initiative to secure the correction of remediable defects neglected by the private practitioner.

Under this policy, the function of these three servants of child health supplement one another but do not overlap. The family physician is primarily responsible for performance of the health examination but the school physician prescribes its form and fits its results into the general school health program. Both the school physician and the public health officer are concerned with the prevention of communicable diseases but they need not duplicate each other's efforts. While the Health Department and the private practitioner are both charged with responsibility for immunization, the usual arrangement is for the Health Department to supply the

materials while the family doctor performs the treatment. This is an example of effective cooperation growing out of sound judgment and good will.

### The Student Section

All physicians concerned with undergraduate medical teaching, postgraduate medical instruction, and hospitals wherein interns and residents are trained should acquaint themselves with that portion of the *Journal of the American Medical Association* called the "Student Section." Herein are contained articles devoted to the educational interests of students, interns, and residents. The latter should be made aware of this portion of the *Journal* and of the role that it plays in the general education of a physician.

There are factors other than scientific knowledge that are necessary for the delivery of a perfect physician. During student days they are scarcely considered because the emphasis has to be placed upon the fundamentals of medicine. During internship, as well as residency, the budding practitioner has little time to devote to anything besides learning how to apply in practice what he has learned at medical school. If these other factors—community interests and obligations, the love of the arts, the development of a social consciousness, and the need for free and frequent interchange of thoughts in fields sometimes far distant from medicine—are not emphasized during the formative stage of a doctor, they may be so vastly overshadowed by the stress placed upon pure medicine that their importance may never again be clearly seen through the dense fog of a one-sided professional training.

The "Student Section" is meeting this need, improvements in the service it renders will be made as time goes on. We suggest, humbly, that some improvements should be made shortly—a book-of-the-month (nonmedical, of course), recommended reading of current medical literature for interns and residents in the specialties, comparisons of the varied systems of medical practice existent throughout the world, and many, many others. To return to our original thought, however, we again call the attention of all interested in the training of a physician to this important section of the *Journal of the American Medical Association*.

### Chronicity and Vitamin C

The significance of vitamin C deficiency in the prolongation of an acute infectious process and its continuance into the stage of chronicity has been discussed in the recent literature. From the

various reports at hand, C-hypovitaminosis unquestionably is a factor which, while as yet not fully determinable as to its influence in these cases, is a definite concomitant of malnutrition in children. Bernfeld, *et al*,<sup>1</sup> studied one phase of this problem in cases of purulent otitis media in children which did not yield readily to local treatment. In 53 children, wherein a chronic purulent otitis, presenting a central perforation through the drum, persisted for more than a year, they found a poor resistance to upper respiratory infections in approximately one-third of the cases under their surveillance. Malnutrition, underweight, and cervical adenopathy were noted in 50 per cent of these children. What seemed to them significant was that a deficiency in vitamin C was apparent in more than 50 per cent of their cases.

This report has been selected merely to stimulate discussion of one problem in chronic infections. There is no issue with the findings of these observers. But, when it concerns the elements involved in the production of a chronic purulent otorrhea, one cannot discard the basic studies of Wittmaack and Eckert-Mobius among others which have proved that developmental and anatomic factors vitally affect the course of an otitic suppuration. Perhaps the histologic findings of these men may give way to observations such as recorded by Bernfeld but further proof is wanted. Until it is forthcoming, the conception of chronic otorrhea as first clearly elucidated by Wittmaack will still stand unquestioned. In brief, this is that any interference with the normal process of pneumatization of the temporal bone will cause such hystoanatomic variations which lend themselves readily to a chronicity in the face of an otitic infection.

<sup>1</sup> Bernfeld, *et al*. Ann. Pediat. 153: 222 (1939)

## Current Comment

"The American people should not be willing to discard a medical system that has made them the healthiest nation in the history of man"—Lowell Lawrence, of Kansas City—a layman who writes on the economic aspects of medical care in the October issue of *Hygeia*

"It is said the average American family pays the doctor seventy-five dollars a year. This will be real news to the doctor"—A recent comment in the *Norfolk Ledger-Dispatch*

"We may yet hope to see the day when the great educational power of radio will become the handmaiden of medicine in its tremendous task of sound health education"—L. D. R., in the *St. Louis County Medical Society Bulletin* of December 22, 1939

"A healthy man must feel unhappy when he listens to the medical ballyhoo on the radio and realizes how easily, surely, and pleasantly he could be cured of many interesting ailments, if he only

had them"—The immediate situation, commented upon by the *Milwaukee Medical Times*

. . .

"Every organization has, roughly, two components, those who do and those who don't. It isn't the former to whom these remarks are directed. Right or wrong, he is in there giving of his best, not infrequently damned by the faint praise of the inertia of the don'ts

"The future of medical practice is in the hands of the medical profession of today. Your responsiveness to and the handling of the changing conditions will determine whether medicine is to be a leading and constructive force in a changing society. You cannot ignore the situation. If you don't make it right someone else will. So get out to meetings, get on committees, acquaint yourselves with the problems to be solved and give of your time and thought. You are the best educated of any group in the community of which you are a part. Why not put that education to work for yourself and the community?"—H. E. Patrick, M. D., in the December issue of the *Bulletin* of the Mahoning County Medical Society of Ohio

. . .

"Those of you who think the Wagner Medical Practice Act is a dead issue are living in a fool's paradise. Wait until the next session of Congress. And if by kind providence the blow should not fall then, read what was said in a recent address by Senator Robert A. Taft. 'I believe that in 1940 a Federal Medical Program of some kind will be adopted. What form it takes depends largely on the medical profession—I believe a Federal aid program can be worked out—I believe it can be worked out with the assistance and cooperation of the doctors themselves'

"The last sounds a little encouraging and takes away some of the sting. But remember, there are doctors and doctors. There are doctors in medical schools who are better teachers than they are practitioners. There are doctors who are better

politicians than practitioners. There are doctors who are purely public health men. There are doctors who represent the A. M. A. Which ones will be consulted? It makes a great difference where the co-operation comes from, even in the medical profession"—Some paragraphs from "The Medical Crier" in the September, 1939, issue of the *Bulletin* of the Mahoning (Ohio) County Medical Society

. . .

"It is the American way of practice that has made us the most healthful nation in the world. Improvements are necessary and the medical profession is constantly improving the distribution of its services as well as its curative and preventive practices. The European way of practicing medicine has been a big influence in the upbuilding of dictatorships, centralization of governments, and wars. Why should we change from our American way?"—We quote from the *St. Louis County Medical Society Bulletin* of recent date

. . .

"Medical education has always been individualistic from ancient preceptorial teaching down through the modern schools. The single variant is the matter of public health, a comparatively recent field of postgraduate specialization. Other than this, the hospital clinics—originally but now secondarily a teaching function of medicine—are the nearest approach to mass medicine of which the profession has had any experience. It is unfortunate surely, and possibly tragic, that the philosophy and practice of medical education are so little known, so badly understood outside of the profession itself. Because, even if it were possibly, a profound revision of medical education and almost complete reversal of its ethics would be necessary if the profession were to be industrialized"—The *Westchester Medical Bulletin* for November

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"It is as vital to our ultimate success and happiness to keep the controlling hand

of the self-seeking politician out of our hospital system as it is to keep it out of our school system"—Ray Lyman Wilbur, M. D.

. . .

"Democracy was no miraculous improvisation, no full-grown energy, but a growth and development. Overnight perfectionists please observe and preserve."—A reminder and a suggestion from the *New York Times* of December 7, 1939

"Medicine has problems—and with the understanding, sympathetic aid of people in all walks of life, these problems are being solved with a resultant gain in life-expectancy so great as to create of itself still more problems to be solved. But medicine appreciates from long laboratory experience that change does not necessarily mean progress, and organization is not synonymous with efficiency.

"The health achievements of our nation, with its mixed national strains, have not been made in spite of—but because of—our failure to adopt foreign procedures. Our gains have been made because we had the foresight to avoid the basic concept of 'care only within limits.' A medical profession shackled to systematized control under the claim that thus will economic security be advanced will result in patients who must abide by rules and doctors who find themselves unable to do that which their training indicates as essential for the sick. Is this not too great a purchase price to pay?"—From an address by Mr. J. G. Crownhart at the annual meeting of the Medical Society of Westchester County on November 21, 1939.

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"There is an analogy between the practice of medicine and world conditions in general. In every country, including our own, there are those who offer political and economic panaceas. However attractive they may seem, they are unproved theories. Indeed, some nations have succumbed to shrill pied pipers and

crackpot theorists, who have thrown overboard tried and established methods and are staking everything on doubtful ideological nostrums.

"The result—we are living in a very sick world. So sick that a few more doses of the new remedies may destroy our entire civilization.

"Let us hope that the doctors in charge of the destinies of nations will come to their senses before it is too late. Perhaps it would be even better if the patient himself, the people, were to discover that beneath the sugar coating of the new pills there is poison, and fire the crackbrained doctors. For sooner or later, they must realize that we cannot discard our accepted and tried though not infallible remedies, for new fangled and unproved panaceas. Or is it too much to hope for?"—L. S. D., writing on "Panaceas" in the November issue of the *Bulletin* of the Mahoning (Ohio) County Medical Society.

"We believe organized medicine can do a better job than the government and by a better job we mean deliver a much higher quality of medical service to the American public. Let us all cooperate to show the public that we can deliver the goods and on a quality basis."—We most certainly are in accord with these sentiments, expressed in the Oakland County (Michigan) *Medical Bulletin* a short time ago.

. . .

"If government provides the indigent with food and clothing, why the failure to provide medical care, when the profession is fully cooperative in this respect? If government has not yet succeeded in the simplest part of the problem, comprising the indigent, is it safe to give it control of the greater and more complicated part, that of medical care for the employed and self-supporting?"—Pertinent remarks of Terry M. Townsend, president of the Medical Society of the State of New York.

## Sulfapyridine Urolithiasis

MORRIS ROBERT KEEN, M D , Huntington, New York

THE rapidly changing panorama of effective medication within the past few years has been accompanied by precarious and dangerous sequelae. Sulfapyridine (a para-amino-benzene sulfonamido-pyridine) with its dramatic results in certain pneumonic processes comes within this group of erratic drugs. For a pneumonia patient to recover overnight, as it were, and then to be precipitated into an acute abdominal syndrome is an unpleasant aftermath for the patient as well as his physician.

The urinary complications following the use of this drug have recently been brought to light from several angles. From the experimental phase, two groups of observers have presented evidence of a most interesting nature. Antopol and Robinson,<sup>1</sup> working on rats, rabbits, and monkeys, noted the formation of urinary concretions, even after a single large dose of sulfapyridine. With repeated feedings, the production of uroliths was more pronounced. Certain species, such as mice and dogs, were not susceptible to stone formation even on large doses of sulfapyridine. Clusters of crystals were found as early as twenty-four hours after the onset of the medication. These "aggregates of crystals" predominated in the lower ureter at the level of the bony pelvic brim. However, the renal pelvis was, at times, distended with blood and crystals. The pathologic picture produced within the kidney varied with the degree of urinary stasis. First seen was a calculus ureteritis followed by pyelitis and a pyelonephritis. A finding of clinical significance is the definite thickening of the ureters and the renal pelvis without associated calculi, present two and a half months after the discontinuance of the medication.

The striking and thorough experimental data of Gross, Cooper, and Lewis<sup>2</sup> so clearly simulates the clinical picture

as to warrant repetition and emphasis. Noting that their animals, although freed of pneumonic infections, succumbed, these workers proceeded with detailed protocol studies. More than 60 per cent of their animals (27 of 39) on a daily diet of 1 Gm of sulfapyridine per kilo of body weight developed calculi within two weeks. These calculi localized at almost any level of the urinary tract. Obstruction was either complete or partial and was accompanied by hematuria, pyelonephritis, and an elevated blood nitrogen. Death appeared secondary to varying degrees of renal damage directly related to the degree of urinary obstruction. The gross pathologic features were enlarged, soft, fluctuant kidneys with dilated ureters and contracted bladders. On section, the renal tissue was swollen, pale, and bulging, with a poorly demarcated cortex. The microscopic features were albuminous degenerations of the tubular epithelium, areas of necrosis, and, in some instances, extensive exudative pyelonephritis. The renal pelvis and ureters, grossly dilated in many cases, presented a smooth glistening mucosa with occasional areas of interstitial hemorrhage. When obstruction occurred at higher levels, the bladders were contracted. No vesical hemorrhage was observed.

In a more recent study,<sup>3</sup> Gross and his associates attempted to determine the ultimate fate of the renal ureteral lesions as well as the concretions formed. They concluded that ureteral and pelvic dilations subsided after the discontinuance of the drug (four weeks). This finding is at variance with the definite persistent thickening of the ureter and pelvic walls noted by others. The lesions frequently observed in the kidney were hyaline thickening of the basement membrane of the adjacent convoluted tubules and vesicular engorgement of the nuclei with



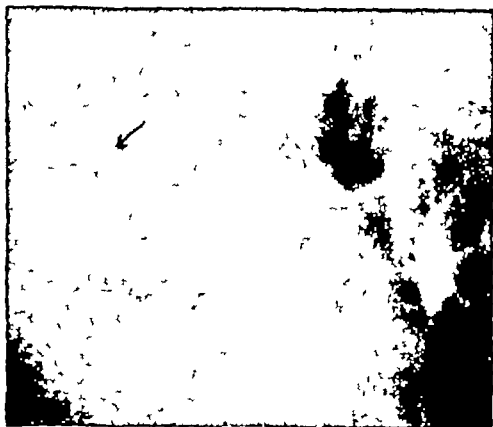


FIG 1 CASE J D Arrow mark points to filling defect noted in the pyelogram, and attributed to nonopaque calculus. Another filling can be seen in the inferior limb of the pelvis

karolysis. The glomeruli were essentially normal.

While the calculi may disappear in man as in the experimental animal, their "solution may be impeded by the precipitation of calcium salts upon the surface, as suggested by Antopol and Robinson, or of protein material." Thus, calculi of acetylsulfapyridine origin may actually grow by adhesion or inclusion of the above elements.

The sulfapyridine calculi varied from a grayish white to a pale yellow in color, had a smooth or spiculed surface, and consisted of crystalline needles and plates.

The clinical duplication of the above experiments is seen in the case reports of Southworth and Cooke.<sup>4</sup> Three patients exhibited hematuria and abdominal pain. An elevation of the blood nitrogen was present in 2 of these. Recovery occurred in all, although the eventual urologic complications remain to be seen.

Hansen's case of a 19-year-old male developed hematuria on the fifth day of medication. The hematuria disappeared in a few days, although the drug was continued. Adalja<sup>5</sup> reports another case of hematuria that disappeared with the cessation of the drug. In a series of 50 cases, Graham and his colleagues<sup>6</sup> found 4 patients exhibiting ureteral pain and hematuria. Many jagged crystals were seen in the freshly voided urine. No

urologic studies were undertaken. Perhaps the acuteness of the prevailing illness made such examinations undesirable.

Toomey found jagged crystals in the urine of patients using this drug. Experimentally, he and associates duplicated the pathologic findings of Gross, Antopol, etc.

In treating 27 cases of pneumonia in children, Fulton and his colleagues noted hematuria in 5 cases (18.5 per cent).

### Case Reports

The following 2 cases are presented because of their related interest to this subject.



FIG 2 CASE G M Arrow marks point to right renal pelvis, which shows numerous mottled areas due to the mixture of blood and Hippuran dye

*Case 1*—J D, aged 52, male, was admitted to the Huntington Hospital on April 3, 1939, because of lower abdominal pain of one day's duration. Ten days previously he had contracted a respiratory infection, accompanied by general malaise, anorexia, fever, and chilly sensations. This was diagnosed as a bronchopneumonia. He was treated with sulfapyridine (total dosage 24 Gm). The day of admission, he developed severe cramplike pain in the right lower groin followed by vomiting. Inability to void or to defecate was present. No previous history of urinary difficulty could be elicited.

Physical examination revealed an acutely ill, apathetic individual. Temperature and respiration were normal. Pulse was 60 per minute. The pupils reacted normally to light and accommodation. The nasal mucosa was congested



FIG 3 Photomicrograph of crystals (sulfapyridine) isolated from Case J D, magnified 50 times

Fauces were reddened. The pulmonic and cardiac areas were normal to auscultation and percussion.

Abdomen spastic right side with a localized tenderness in both upper and lower quadrants and in the flank. No palpable masses.

The external genitalia were normal to palpation. Rectal examination: anal tone good, prostate soft. Both seminal vesicles were boggy.

The extremities were normal in appearance and reaction.

Laboratory Data (April 3, 1939) Urine (catheterized) reaction acid, sp gr 1.021, sugar negative, alb 1 plus, acetone 2 plus, diacetic ac. negative. Micr 1-2 w b c. per h p f, 40-50 r b c, rare clump of w b c. Blood count: hemoglobin (100 per cent) r b c. 4,710,000, w b c 11,550. Differential 9 per cent small lymphocytes, 90 per cent polymorphonuclear. Schilling Index juvenile 3, stab 22, segmented 65. Wassermann negative.

Urologic consultation was requested. The features of this examination were rigidity and spasticity in the right lower quadrant, with vague right lumbar distress. An acute surgical abdomen was also considered but final opinion was deferred until a cystoscopy could be performed.

The urologic survey was as follows:

a Plain K U B film. The left kidney is normal in size, contour, and position. The right kidney is obscured. In the right lower part of the abdomen there is a collection of gas in what appears to be a tremendously dilated loop of bowel. There is no evidence of an opaque calculus.



FIG 4 Crystals magnified 70 times

b Cystoscopy disclosed a small, yellowish, ovoid body,  $\frac{1}{8}$ " in diameter, protruding from the right ureteral orifice. On the floor of the bladder were several clusters of soft crystalline matter. The bladder neck showed some elevation in the midline. Intravenous indigo carmine appeared within five minutes from the left ureteral orifice and none from the right side after fifteen minutes. With a ureteral catheter, the yellowish ovoid body was dislodged from the ureteral orifice and a catheter then passed to the right renal pelvis without any difficulty. A strong blue was obtained from the right renal pelvis. Catheterization of the left ureter was uneventful. The rate of flow from the right side was twice that of the left. Divided urines were as follows:

Specimen	Micros	Gram Stain	Culture
Right kidney	0-5 w b c	No organism	Sterile
Left kidney	15-20 r b c 1-4 granular casts 1-10 hyaline casts 10-15 r b c		
Bladder	Shreds 20-25 r b c 1-2 w b c		

Bilateral pyeloureterograms were performed with 20 per cent sodium Hippuran. A No 5 F ureteral catheter was left within the right renal pelvis.

c Pyelographic report: left renal pelvis calyces, and ureter appear normal, right renal pelvis and calyces are somewhat dilated, a circular filling defect is noted in the upper major calyx.

A tentative diagnosis was made of right renal obstruction secondary to ureteral calculi, possibly of sulfapyridine origin. This diagnosis was facilitated by a previous conversation between our resident, Dr W Bennett, and Dr Lawrence of the New York Hospital. The latter had ob-

	Microscopic	Gram Stain	Tbc	Culture
Right	Hyaline casts, many r b c	Negative	Negative	Sterile
Left	R b c. 3-4	Rare gram neg cocci	Negative	Staphylococci
Bladder	R b c. 1	Negative	Negative	Staphylococci
All specimens contained a brownish debris				

served this renal phenomenon in pneumonia patients treated with sulfapyridine

Analysis of crystals isolated from ureter and bladder a small portion of the urinary calculus was dissolved in dilute hydrochloric acid To the resulting solution, a small amount of sodium nitrite was added The mixture was then chilled To this solution, an equal amount of alpha dimethylnaphthylamine was added and allowed to stand at room temperature A deep red color resulted This was chemical evidence of the presence of a nitrated benzene ring—W R Powers, M D

Clinical Course April 5, 1939 catheter drainage removed, no complaints, T P R normal April 7 slight attack of right renal colic, fluid output copious April 9 patient is up and about, voids without difficulty April 12 discharged Urine showed a trace of albumin, 8-10 w b c, 1-3 r b c, and few clusters of w b c.

Case 2—G M, aged 29, was admitted to the hospital on April 13, 1939, because of severe pain in the right loin, radiating to the groin, associated with painful urination Five days previous, he had experienced chills, a cough, and left posterior chest pain Fever was 101 F, pulse 120, blood pressure 125/80 At the time, coarse rales were heard at the left base posteriorly, but no dullness A diagnosis of pneumonia was made and confirmed by a medical consultant Sulfapyridine was started with a dose of 2 Gm Total dosage was 9½ Gm Nausea, abdominal cramps, and diarrhea developed The temperature and pulmonary signs abated within forty-eight hours after beginning the drug

The past history was essentially negative save for an occasional period of urinary frequency Physical examination revealed an extremely apprehensive male. Temperature, pulse, and respiration were normal The pupils were dilated but reacted well to light and accommodation The nasal mucosa was congested Fauces were clear The pulmonic fields were normal save for some dullness with a few crackling rales at the right base posteriorly The cardiac field was normal Blood pressure was 120/85 Abdomen definite rigidity and tenderness in the right lower quadrant and the right costo-vertebral angle Genitalia penis and scrotal contents were normal to palpation Rectal anal tone good Prostate soft and small Ex-

trémities normal in appearance, reflexes normal

Laboratory Data (April 14, 1939) urine color straw, clear, reaction acid, sp gr 1.022, alb faint trace, sug negative, acetone negative, micr 1 w b c. per h p f Blood count hemoglobin (79 per cent), r b c 4,600,000, w b c. 10,600, polymorphonuclear 78 per cent Small lymphocytes 4 per cent, large monocytes 6, large lymphocytes 12 per cent. Wassermann was negative.

X-ray examination of the chest showed a slight increase in the bronchial markings in both lower lobes The appearance was that of a bronchitis The diaphragm moved freely on both sides and the heart was not enlarged

Urologic survey was as follows

(a) Plain x-ray of the urinary tract showed both kidneys to be normal in size, contour, and position and there was no evidence of an opaque urinary calculus

(b) Cystoscopy revealed a reddened and edematous mucosa in the region of the right ureteral orifice Intravenous indigo carmine appeared promptly from the left ureteral orifice. None was seen from the right side in fifteen minutes At the end of this period a ureteral catheter was passed to the left renal pelvis without encountering any obstruction Return flow was of normal rate and grossly clear The right renal pelvis, when catheterized, drained old sanguinous fluid profusely for about ten minutes Divided kidney studies were as listed in above table

When the right ureteral catheter was withdrawn, a stringy clot was seen protruding from the ureteral orifice This clot, when examined under the cystoscopic lens, contained several tiny, yellow, ovoid bodies

(c) Right pyeloureterogram disclosed some dilatation of the renal pelvis and calyces The density of the right renal pelvis was less than normal as though the solution were mixed with a nonopaque substance such as air or blood

Diagnosis right renal obstruction secondary to old blood clots, renal irritation possibly secondary to crystals of sulfapyridine. Tumor of the renal pelvis to be excluded

Advise indwelling right ureteral catheterization and pelvic lavage

Clinical Course (April 14) right ureteral

catheter not draining No improvement following irrigation, removal of the catheter (April 15) no renal tenderness Fluid forced, some elevation of temperature (April 16) acute right renal pain, dysuria, and nausea. Two small blood clots passed Temperature, pulse, and respiration normal (April 18) out of bed No renal tenderness (April 19) recurrence of severe right renal pain. Tenderness present in the right costovertebral angle Right abdominal muscle spasm is present Urine shows a trace of albumin, 10-15 w b c and 2-4 r b c. (April 20) Sudden relief of pain Temperature 99 F Discharged for further observation at the office (May 19) one attack of right renal distress which subsided spontaneously Intravenous pyelography shows a normal left pyelogram but an incomplete filling of the right renal pelvis There is a suggestion of a small filling defect within the pelvis

Both cases developed acute renal obstruction following the ingestion of sulfapyridine in amounts varying from 9 to 24 Gm Crystals simulating sulfapyridine were found Red blood cells and casts were present in the urine from the affected kidneys One case subsided spontaneously following catheter drainage and increased fluid intake. The other has had several recurrent attacks of right lumbar pain A recheck intravenous pyelography showed a small defect in the right renal pelvis (residual clot<sup>3</sup>) At no time did the urinary output diminish to an alarming degree. Unfortunately, blood nitrogen studies were not done A moderate leukocytosis with a polymorphonuclear increase was noted Temperature reaction was slight. An acute surgical abdominal condition seemed possible at one time

The factors in the production of sulfapyridine calculi may be

- 1 The marked dehydration of a toxic pneumonia patient.

- 2 The proved limited solubility of

sulfapyridine (1 1,000) room temperature and the even greater insolubility of the acetylated derivatives (Cooper, Gross, and Lewis)

## Conclusion

- 1 Two cases of right renal obstruction secondary to sulfapyridine therapy are presented

- 2 The experimental background emphasizing the clinical picture is reviewed

- 3 The possibilities of future urologic complications (nucleus of permanent stone formation and ureteral wall damage) are stressed

Since this article was submitted for publication (June, 1939), Snapper and his associates reported the occurrence of hematuria and colic during sulfapyridine treatment both in children and adults A renal calculus composed of acetylsulfapyridine crystals was found in one adult

Plummer and Emsworth have recently stated that the drug's toxic effects involving the kidneys and ureters were the most disturbing Two adults of their series developed definite renal calculi

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## INTERNATIONAL COLLEGE OF SURGEONS

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# STUDIES IN THE GROWTH AND DEVELOPMENT OF CHILDREN

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(From the Department of Pediatrics, New York University, and from the New York Infirmary for Women and Children)

**W**ITHIN recent years there has been an increasing interest in the problems of growth and development. I propose to discuss today two applications from these studies to the practice of pediatrics: first, the use of standards of physical growth, and second, the significance of a knowledge of growth and development for the psychologic care of the child.

## Standards for Physical Growth

The standard that is at present most widely used is the Baldwin-Wood table. It is represented as an age-height-weight table, but a moment's study will show that it is actually a height-weight table and that age might have been omitted without causing any very serious error. It is assumed, according to the Baldwin-Wood table, that if the child's weight for his height corresponds to that on the chart, the child is normal. The assumption here is that height is a sort of fixed point and is not influenced by, let us say, an inadequate diet. But this is not true. Height is influenced by the environment in just the same way as is weight. (We cannot say which is more influenced, since inches and pounds cannot be compared.)

The Baldwin-Wood table is the simplest of the available standards. There are others that include more measurements. Thus Lucas and Prior include hip breadth in their growth standards. But the diameter of the hips happens to be one of the measurements that is influenced by an adverse environment even more than is height.

There are some standards which make necessary a great many more measurements for an estimate of proper weight.

Of course, it is apparent that if enough body measurements are taken, such as height, size of extremities, thickness of subcutaneous fat, etc., it will be unnecessary to weigh the child in order to make a prediction of weight. Whether this serves any useful clinical purpose is highly doubtful.

The requirements for proper growth standards are

- 1 They should be based on children who receive most nearly optimal care. Standards obtained from children who are themselves improperly cared for and hence below par are of little value. The standards which we have prepared are based on the weights and heights of private school children in New York City. It is probable that this group has received as good medical supervision as is available.

- 2 Separate standards are necessary for boys and girls. This may seem obvious but, curiously enough, the curve most widely used for infants does not take sex into consideration, although boys weigh about 10 per cent more than girls during the first year of life.

- 3 Separate standards are necessary for colored children. They grow more slowly than white children, and though this may be due to poorer hygienic surroundings, it is hardly justifiable to make this assumption without more data.

- 4 Standards should be simple. We believe the most suitable standard at the present time is the age-weight and age-height standard.

- 5 Proper standards should indicate, in addition to the average growth curve, some measure to show how children vary around the average. We have used for

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this purpose a statistical device called the standard deviation. If we construct charts or tables which take into account the standard deviation we obtain a zone around the average which includes two-thirds of normal children. One-sixth of normal children will be above this and the remaining one-sixth below it (see Fig 1).

It is hardly necessary to state that growth standards in no sense replace clinical judgment. They can, however, be useful as aids if they are properly used. Generally speaking, it is fair to state that the farther away a child is from the average for his age, the more likely he is to be abnormal. Furthermore, when repeated measurements are made on the same child, growth standards may be very valuable in that they show whether the child's growth is keeping up with or surpassing his group.

### Psychologic Growth and Development

It is becoming increasingly apparent that the child must be looked upon as an integrated unit and that optimal child care should include psychologic as well as physical care. Proper psychologic care, like proper physical care, requires an understanding of the principles underlying growth and development. We need to know to what extent the child can be expected to adapt to the environment and to what extent the environment must be adjusted to the child.

The child's adaptability is limited by his developmental plan. It is now pretty generally accepted by students of this subject that development or maturation takes place according to a plan and a sequence that is innately determined and that cannot be readily altered by attempts at acceleration or retardation. The child's psychologic traits—his motor skills—his ability to acquire information, his emotional responsiveness—emerge according to a plan and a sequence that differs for each individual child. The developmental pace is set by the germ plasm. It is for us to see to it that an environment is provided which will give the child optimum opportunity for

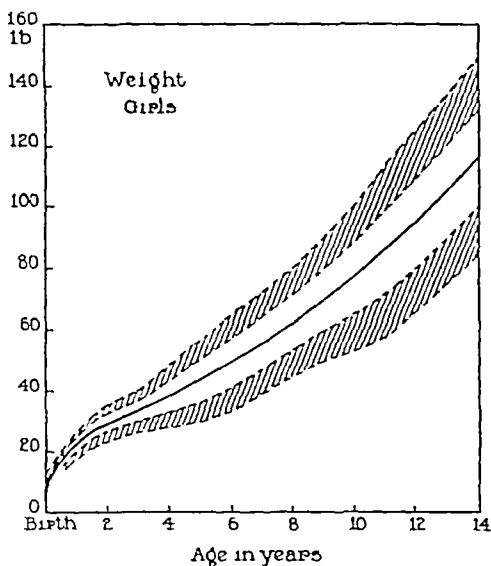


FIG 1 Weight curve of girls from birth to 14 years. The continuous line represents the average weight. The clear zone on either side of this line includes approximately two-thirds of normal girls and each of the shaded zones the remaining one-sixth. For example, if one were to weigh 100 healthy girls, one would expect to find approximately 16 in the upper shaded zone, 33 in the clear zone above the continuous line, 33 in the clear zone below the continuous line, and 16 in the lower shaded zone. About 2 per cent would fall outside the shaded zones.

growth within the framework of the developmental stage at which the child happens to be.

I should like to call your attention at this point to the difference in the concepts of development and growth. The term "development" refers to the unfolding of the mature pattern. It refers to the innumerable stages and processes through which human form and function pass from birth to maturity. Growth, on the other hand, is strictly a quantitative concept and refers to change in size or to increase in information, skills, or emotional interests.

The emergence of the psychologic developmental plan, like the physical, is obligatory and not optional. The child must be permitted to exercise his developing skills and feelings and we, therefore, speak of psychologic needs just as we speak of nutritional needs. Similarly, we may speak of psychologic

deficiency disease when a child is deprived of psychologic gratification, analogous to nutritional deficiency disease when a child is deprived of a proper diet.

From a practical standpoint, this means that a child may be injured psychologically and have disturbances of behavior if we attempt to interfere with his developmental plan either by trying to hurry him or retard him, or by failing to allow gratification for his psychologic needs, or by overindulging his needs. It is obvious, therefore, that a knowledge of psychologic growth and development is just as necessary for proper child care as is a knowledge of physical growth and development.

### Discussion

Dr Daniel P. Peeler, *Rochester, New York*—This splendid paper we have just listened to is very timely and is of great interest to us all.

There has been a great deal appearing in the literature lately about various standards that we should use in determining the normality or abnormality of our little charges, and it appears to me that a great deal of this scientific work is not practicable or applicable to those of us in actual pediatric practice, for we would need a staff of workers and an office of equipment that would be financially impossible to maintain.

Unfortunately, through the radio and through pamphlets, much has reached the laity that is disturbing beyond words, not only to physicians but to parents as well. There is not one of us who has not been presented with just such a problem, where the parents have not taken into consideration the child as a whole unit such as the authors of this splendid paper have presented to us this morning.

In order to arrive at a correct impression of the individual we must have not only some conception of the individuals comprising his or her age group, but it is also essential that we should know something of the environment in which the child lives, the hereditary background which plays a very important role. For example, if we, by digging, can pry loose from the parents the fact that it has been a familial characteristic for the various individuals in their antecedents to be small in stature and undernourished during early childhood or vice versa, then we are able not only to reassure the parents, but are able to have for ourselves a better understanding of what to expect in growth and development for this individual child.

Dietary intake is one of the best guides to understanding the growth and nutrition of our charges and, unfortunately, too many times the busy pediatrician overlooks this important factor. A useful method to obtain this is to ask the mother to keep track of the child's meals for a week, as to articles and quantities of food taken. This will prove illuminating not only to the physician, but to the parents as well.

We have set up standards for the mental growth and development of the child which must also be carefully used lest we cause unnecessary worry and heartaches for our parents. It has been customary in early childhood to take the times of sitting, teething, walking, talking, and the like—which are physical growths—as a rough measurement of what to expect from the child as to mental development later on. Here also the factors brought out by the Doctors Bakwin must be considered, that is, race, sex, environment, heredity, and dietary regimen. For all of these go hand in hand to make up the individual and before we venture an opinion the child as a whole must be carefully studied. The tendency to overlook these factors is one great weakness of the psychologists.

Will you bear with me while I cite a case? A boy of 2 years of age was first seen in our Child Guidance Clinic for feeding problem and enuresis. Parents were unsuited to each other and there was much conflict in home, mother was unstable, child was pale, undernourished, closely attached to mother who waited upon him and gave into his every whim, at the same time showing definite rejection. Child developed impetigo, had to be hospitalized to clear up. Child did not develop normally—either physically or mentally. He was seen again four years later because of poor physique and nonprogression in his school work. At this time, he was placed in a rural foster home where by skillful handling both in the home and in the school, the boy, within two years, was on the honor roll in his school grade, up to the placement as to age, and, physically, was a normal, robust boy.

Before closing, I should like to ask Dr. Bakwin how he interprets the findings of Jeans and his co-workers, namely, that the intake of vitamin "D" has a definite effect upon the linear growth of the infant when taken in amounts of 340 to 600 units daily.

Dr. William S. Langford, *New York City*—I shall discuss this paper from the aspect of the more psychologic factors in the growth and development of children. As Dr. Bakwin has indicated, in order to deal successfully with

children the practitioner of pediatrics must be familiar with both the physical and psychologic aspects of growth and development in children. This knowledge is of greatest importance in the prevention of emotional maladjustments in childhood. The prevention of such difficulties is an important aspect of the practice of pediatrics. It is in this sphere that the pediatrician may well be of greatest service to the children who are brought to him. Here, as always, an ounce of prevention is worth a pound of cure and certainly the treatment of a well-developed personality disorder may tax the resources and ingenuity of a skillful psychiatrist.

I should like to stress some of the preventative work that can be done in pediatric practice in connection with the routine visits of the infant and child for periodic examinations and advice as to general hygiene. It is well not to attempt too much in the sphere of mental hygiene when the parent is agitated and anxious over an acute physical disease. Such advice should be given with a thorough knowledge and understanding not only of psychologic and emotional growth and development, but also of physical growth and development. Dr. Bakwin has wisely stressed the importance of the child's fundamental need to be considered a unique individual and to be permitted to grow and develop at his own rate of speed. Much unhappiness in childhood and later life can be avoided if we help parents to remember this basic principle. The child, then, will not be used as the means with which the parents keep up with the Joneses (or even attempt to surpass them) in matters of weight gain, time of walking, talking, or teething, and in earliness of toilet training, or as the outlet for satisfying their own earlier, thwarted ambitions. In the latter case the child is often pushed into a vocation which he dislikes and for which he shows no aptitude. Feeding difficulties can often be prevented by the alert

pediatrician who sees the mother's tendency to stuff and force food into the unwilling child so that he may gain more rapidly. He can prepare the parent for changes in rate of weight gain. He can help the parent or nurse make the weaning from breast or bottle to the cup a less traumatic experience than it usually is. The method of administering the food is just as much the physician's business as is the type or quantity of the food. Toilet training may be poorly handled and serve as a focus out of which develop personality difficulties in the child or even deep-seated resentments which interfere with the normal development and progression of parent-child relationships. As a rule, it is begun too early and the failure of the child is interpreted as stubbornness. The optimal time for beginning toilet training varies in different children, once the child is ready, provided methods are not too harsh or unwise, it is likely to proceed quite satisfactorily. It should not, on the other hand, be begun too late, as it may then coincide with the negativistic period which starts in most children at the end of the second year. This period normally lasts a few months and causes parents a good deal of concern. They can be prepared to expect its coming and be helped to handle it constructively. The constant "no, no" of the child, his increased irritability and tendency to do things by opposites are best handled by ignoring the petty "no" and "I won't" replies and at the same time insisting on matters of daily routine with gentle firmness. So-called "reasoning" with the child serves only to intensify his resistiveness. Demands on the child should be reasonable and all semblance of a power contest avoided. The child needs the same good-natured sympathetic attitudes and encouragement that are indicated in all contacts with children who are constantly learning new things and needing to develop new capacities.

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### A DANGEROUS ENEMY

We hear a great deal these days about enthusiastic "left wingers" who would radically alter the present methods of medical practice. Among this group are ardent supporters of compulsory health insurance, government or privately subsidized medicine and out-and-out state-controlled and supervised medical practice. Not a few of these proponents of change are offensively vocal, principally because they are uninformed. Of course, not all of those who favor changes in medical practice are radicals but those who are take advantage of every opportunity to urge their cause. Then, too, there is a small minority group in the profession itself which favors pro-

posals as "radical" as any already advanced.

Disturbing as have been the activities of these enemies of the present system of medical care, it is our opinion, declares the editor of the *Medical Annals of the District of Columbia*, that they are far less dangerous to the future of medicine than the indifferent medical practitioner. If there were only a few of such practitioners it would not be serious. The difficulty lies in the fact that they constitute a large segment of the profession.

Nothing is as deadly as indifference. Nothing is more difficult to combat. There is at least a chance for accomplishment where there is opposition but what can one do in the face of inertia!



# ROENTGEN RAY THERAPY OF ACUTE MASTITIS DURING LACTATION

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(From the Woman's Hospital)

TREATMENT of acute and chronic inflammatory conditions by exposure to roentgen rays is not new. It was tried sporadically and experimentally from the earliest days of roentgen therapy, and in recent years its value has been widely recognized in a variety of conditions—erysipelas, furuncles, and carbuncles, cellulitis, tuberculous adenitis—to name but a few. Numerous contributions on the general topic have appeared, notably by Hodges<sup>1,2,3</sup> and by Desjardins,<sup>4</sup> but no specific study on irradiation of acute mastitis has yet been published in this country. In February of this year, Elward and Dodek<sup>5</sup> presented a paper before the Postgraduate Clinic of the Medical School of George Washington University, reporting on 25 cases and giving a review of the literature. As their paper is to be published shortly, I shall not attempt to include here any general discussion of this literature, but refer to it only when needed for comparison with my own material.

My report comprises 44 cases treated in 1938 and the first three months of 1939. Most, if not all, of the symptoms of redness, heat, swelling, induration, pain, and fever were present in all cases of the group. Simple engorgement of the breasts, no matter how painful, was not treated by roentgen therapy. It is the experience of all practicing obstetricians that a large proportion of cases of acute puerperal mastitis subside spontaneously or by the use of the usual palliative ice bags and supporting binders. In this series of cases the only treatment has been supporting binders plus fractional x-ray irradiation. If, in spite of this treatment, the process progressed to active suppura-

tion, the abscess was incised and then drained in accordance with the usual surgical procedure. All cases subsequently healed. The advantages of x-ray treatment to be set forth herein are as follows:

- 1 Prompt relief of patient's symptoms, particularly pain.

- 2 Seemingly more rapid resolution of the inflammation, though comparisons of course are difficult to prove.

- 3 If suppuration is inevitable, x-ray tends to limit and more definitely demarcate the process, hastens fluctuation, and after incision accelerates healing.

- 4 Percentage of cases suppurating is lowered slightly in our total series, and markedly in those receiving optimum treatment.

A young woman physician with a five month-old baby, whom she was nursing, presented herself one morning in the x-ray department, saying that her breast felt sore on arising and had become rapidly more painful during the forenoon. On examination there was found a red, indurated, exquisitely tender area about 12 by 10 cm. in diameter in the outer hemisphere of the right breast. She was given the usual small dose of x-ray and sent home to bed. She returned to work in the hospital the next morning with this report. On reaching home after treatment, her temperature was 101 F and she was in great pain. She went to bed and slept for three hours. On waking, her temperature was 100 F, her breast uncomfortable, but not actually painful. At 9 00 P.M. her temperature was 99 F, her breast tender to the touch, but with no pain. Second day examination showed induration diminished by two-thirds, redness gone, tenderness slight, tem-

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Syracuse, April 25, 1939*

perature normal, no pain whatever. A second treatment was given for safety and there has been no recurrence.

All patients do not resolve as rapidly as this. The case is used here to illustrate the optimum result, and also because the patient, as a physician, was a trained observer and an unusually reliable reporter of symptoms. The means by which small doses of x-ray affect inflammation is not well understood. It is known that white cells, leukocytes, and particularly lymphocytes, are especially sensitive to irradiation. The theory is rather generally advanced that alteration or destruction of these cells gives off some ferment, antibody, or other product of molecular ionization which tends to inhibit or resolve, by phagocytic or chemical action, the inflammatory process.

The Woman's Hospital for the three years, 1936-1938, had 4,568 deliveries. Of these, 152 had nonsuppurative puerperal mastitis, and 35, or 0.7 per cent, had breast abscess. This percentage corresponds closely to that of 0.55 per cent reported by Dippel and Johnston<sup>6</sup> in a study of 20,258 women from the Obstetrical Service of the Johns Hopkins Hospital between 1896 and 1934. On the basis of this close correspondence and the large numbers involved, our material can, I think, be considered typical of good hospital practice, at least for this country. In trying to evaluate the effect of x-ray treatment on suppuration, I took the years 1936 and 1937, when no x-ray was given, and 1938, when it was given on some cases and not others, and then added the cases treated so far this year (see Table 1).

On the basis of this chart the gross improvement of the single factor of suppuration does not seem significant, but the x-rayed cases are few. Taking the entire number of 44 treated in 1938 and 1939, 9 or 20 per cent, abscessed, but 4 of these were at the point of fluctuation when treated—the treatment being given to hasten the process—so that it was not possible to “save” the breast. If one might be allowed to consider the other 5 as a fair trial, and failure, of x-ray to

TABLE 1—ACUTE PUERPERAL MASTITIS  
Comparative Table with and without X-ray Treatment

Year	Total Cases	Non suppurative	Suppurative	Percentage Suppurating	X-ray Treatment
1936	64	51	13	20	0
1937	46	37	9	20	0
1938	52	43	9	17.3	0
1938	25	21	4	16	X
1938 & 3 mo 1939 Breasts not fluctuant at first treatment	44	35	9	20	X
Breasts treated in first 24 hrs after onset	46*	41	5	10.8	X
	36*	35	1	2.7	X

\* Figures refer to total breasts, not total patients. Six of 44 patients had bilateral involvement, hence 50 breasts treated. Of bilateral cases 2 developed abscess in a single breast.

prevent suppuration, that would cut the failures to 10.8 per cent, much lower than any of the above percentages. Further consideration of the abscess cases and of other factors in resolution will be given below.

As this is an obstetrical and not a roentgenologic gathering, I shall give only the two most important factors of my technic, namely:

1 Small individual doses, 50 to 60 roentgens at a time.

2 Low, rather than high voltage, in the range of 120 to 125 kilovolts, with aluminum filtration.

This quality and quantity of radiation seems to me ample. Even with six treatments, the most I have ever given (to 2 patients), the amount reaching the skin is far below a threshold erythema, and the amount reaching the underlying lung is negligible. I sometimes give 75 roentgens if the treatment portal is very small. Some workers give considerably more treatment than I have described, and it is true that with these small amounts of x-ray there is considerable leeway. But I feel that in such a benign condition the minimum amount of effective treatment is most to be desired.

The number of treatments necessary shows wide variation. Thirty-eight patients had one breast involved, 6 had two, hence there was a total of fifty breasts treated among 44 individuals. In the single-breast group, 15 had one treatment, 12 had two, 5 had three, and 6 had from four to six treatments. Of the 6

patients with bilateral involvement, 1 had a single treatment to each breast, another required one treatment to one breast and three to the other, the remainder varied between two and five treatments. Where more than one or two treatments were given, the field exposed to the rays was gradually reduced. A large, red, indurated area requiring a skin portal 12 by 14 cm on the first treatment might call for a 7 by 7 cm portal on the third, perhaps a 4 by 4 cm portal on a possible fourth round—the purpose of the latter being to help resolve a small indurated central core, even though fever, redness, and pain had already disappeared. Margraf, quoted by Elward and Dodek, stated that he had 61 per cent resolutions if one or two treatments were required, 33 per cent with three treatments, and that treatments beyond three were of no value. I have not found this to be the case, but his percentage of resolution in all classes is low.

The most important thing, judging by this group, is not the number of treatments applied, but how early the treatment is started. Thirty-six breasts were referred for treatment within twenty-four hours of the onset of the chief symptoms—fever, redness, induration, and pain. Of these only one, or 2.7 per cent, suppurated (see Table 1). All the rest recovered promptly. The one which did not was one of the first cases treated. She received a single treatment, her acute symptoms subsided within two days, and she was discharged in four days, with a tiny area of induration remaining in the center of the previously involved area. She returned a week later with a small abscess in this location. She should have had more treatment. The abscess was incised and healed promptly. Of the remaining 35 cases, 18 required only one treatment for complete resolution, with no recurrences. The others required for the most part two or three treatments.

Fourteen breasts were sent for treatment from forty-eight hours to five days after onset of the mastitis. Of these eight

suppurated, or 57 per cent. However, four of the eight were practically or entirely fluctuant when first seen. Excluding these, we have ten breasts in the group sent late, with four going to supuration, or 40 per cent. Statistically, it would appear that roentgen treatment was of little avail unless instituted early. Nevertheless, because of enthusiastic cooperation in the Woman's Hospital, I have a much larger group of early than of late cases, and of the late ones, six did actually resolve without going to abscess.

Furthermore, it is my impression that the suppurative cases that had received x-ray treatment healed more promptly than at least some of those that did not. In looking over a series of Woman's Hospital charts of breast abscess, I find frequent notes of second, and occasionally of third admissions, that is, two admissions for incision of one or more abscesses in a breast. Dippel and Johnston, in their series of 113 breast abscesses, report second operations on as high as 26.55 per cent. The following case is interesting in this connection.

A primipara, aged 23, had two successive abscesses in her left breast, at three and four weeks, respectively, after delivery. She was given no x-ray treatment on the breast at any time. Both abscesses were incised and drained. Seven weeks after delivery she returned to the follow-up clinic with mastitis in the right breast and was referred for x-ray treatment. She presented a hard, tender, reddened area about 8 by 8 cm, with a small fluctuant center. She was given five treatments of 50 roentgens each, in seven days. After the third treatment, the small softened center opened spontaneously, and within a week the surrounding induration had absorbed and the tiny central abscess had healed. The two incised abscesses in the opposite breast were still draining after almost a month.

A number of other observations made by writers on this topic seem to me to bear more on the subject of mastitis in general than on the x-ray treatment of it, so I shall enumerate them but

briefly The series comprised 24 primiparas and 20 multiparas The oldest was 37, youngest 18, average age 26.8 The right side was involved in 20 cases, left in 18, both in 6 Six of the 9 abscess cases had culture reports, with staphylococcus albus in 4, aureus in 2 This number is too small to have meaning Dippel and Johnston report 40 aureus and 7 albus out of 60 cultures The time of onset after delivery showed nothing of significance except a predilection for the tenth and eleventh days, when there were 16 cases A single case occurred two months before delivery, and there were 7 after the third week, the latest, at five months, being described above. Twenty-five came within the first two weeks Double breast involvement was more recalcitrant to treatment, in the sense that a higher average of treatments per breast was required, and in 2 of the cases, one of the breasts abscessed In the remaining 4 double breast cases, both sides resolved

The matter of continuing lactation depends on the preference of the attending obstetrician, also on how early the case is referred for treatment, and how quickly responsive it proves to be. Where a case is treated in less than twenty-four hours from onset and resolves with one treatment, no interruption may be necessary, or interruption

for one or two nursings Where there is a large area of involvement that does not respond to a first treatment, drying of the breast is usually preferred A few women requiring multiple treatments have insisted on nursing their babies and have done so successfully

### Summary

Roentgen treatment of acute mastitis during lactation presents the following advantages

- 1 Prompt relief of pain
- 2 Shortened duration of the process
- 3 Striking diminution in number of cases going on to suppuration if treated within the first twenty-four hours—27 per cent in this series, against an average of 18 per cent to 20 per cent in non-treated material
4. If suppuration occurs, more prompt localization of the process and a shortened period of healing

124 East 81st Street

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### THE FAMILY DOCTOR

For my part I am still unconvinced that the family doctor is an anachronism I still want somebody to save me from unsuitable or excessive specialist advice, I need someone to coordinate the findings of specialists and discount them if necessary, and above all I want someone who is willing to talk to me, at length, about my migraine, my little boy's delinquencies, my wife's recent strangeness, my baby's inoculation, and my daughter's desire to marry a man with asthma.—*Onlooker, Lancet*

### WELL-MERITED BOUQUET

The *Detroit Medical News*, in an appreciative review of Dwight Anderson's *What It Means to Be a Doctor*, says "During recent years, some of the best material in medical-public relations has come from the New York Society's Bureau, and from the pen and mind of Dwight Anderson. This sprightly little book, his latest effort, is the story of a medical student and the beginnings of his practice It would be an appropriate addition to the practitioner's waiting-room table."

It is not unscientific, as some scientists seem to believe, for even a scientist to make his meaning clear.—*Albert E. Wiggam*

In no profession does culture count for so much as in medicine, and no man needs it more than the general practitioner.—*Sir William Osler*

# PSORIASIS—WHAT TO DO ABOUT IT

HERBERT H BAUCKUS, M D , Buffalo, and ALBIN V KWAK, M D , Depew, New York

**P**SORIASIS is an old and common cutaneous disorder dating from antiquity. Its etiology and treatment are admittedly controversial. While psoriasis has an unknown etiology in which heredity possibly plays some part, there is some knowledge relating to the occurrence of this disease. The majority of patients are well except for skin manifestations. There are, of course, reasons pro and con as to whether or not it is an infectious disease.

Examination of literature discloses many curative agents and a varied local and general therapy proposed to combat this disease. Time-worn are the phrases describing psoriasis as dry, scaly dermatitis with rings and gyrate figures occurring in certain related areas of the body. A statement to the patient that he has an incurable disease, although a relatively harmless one, will later merit consideration. It may sound rather bold to say that atypical psoriasis is more prevalent than the characteristic form. Probably that is so because unusual cases come to the attention of the skin specialist, and ultimately most cases of psoriasis are seen by the dermatologist. Many, to be sure, have been affected by previous treatment.

The unusual manifestations of psoriasis demand early recognition in this disease. This is especially so in cases in which the scalp is involved. There is some relatively causative, unknown factor to be explained where we see a real seborrheic dermatitis with inflammation and exudation extending to the face and ears, and it is not until some years later that typical psoriatic lesions are found. Is this transition or so-called transformation some manifestation of an allergic or metabolic process? Some may question this and call it a mistaken diagnosis. It is a known fact that such lesions are early recognized

as seborrheic but only later on assume the psoriatic role.<sup>1</sup>

Just as we have the seborrheic element involving the scalp and postaural areas, so do we have the counterpart which is the sudaminal element in the hands, soles of the feet, axillae, perineum, and the intertriginous areas. The lesions of the palms and soles develop fissures and exudation. We are all familiar with psoriatic lesions of the perineum and groin that have to do with psoriatic lesions of typical, characteristic distribution elsewhere. But we also see many cases in which lesions are quite different, characterized by a great reaction causing itching, exudation, and general inflammation. Some of these cases are mycotic, and some are mixed types of infections—infectious eczematoid dermatitis, occupational dermatosis, palmar and plantar syphilides. Most of the dermatologists agree that there are cases of pustular psoriasis. Special attention is needed for lesions of male genitalia and natal cleft. Lesions of the mucosa appearing on glans penis occur more often than is popularly supposed. Cases have been reported of psoriasis followed by mycosis fungoides. Its relation to cancer and trauma and various other aspects have been discussed in the literature. Some of the so-called seborrheic eczemas of the ear canals are really psoriasis, and we have one case of a definite psoriatic lesion encroaching upon the tympanum.

This disease may be present alone from the beginning, or perhaps in association with other skin disturbances later leaving a psoriatic predominance. Also there is a universal belief that arthritis may be a part of a psoriatic syndrome. This arthritis usually affects more than one joint, and this subject requires a great deal of investigation. There are cases of acute gen-

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 27, 1939*

eralized dermatitis which later leave typical psoriatic patches. While the microscopic pathology of psoriasis is quite definite, these examples of inflammatory reactions are quite difficult and sometimes impossible for the dermatopathologist.

To combat this disease we should use the methods that will result in a minimum of annoyance and discomfort to the patient. Methods must be suitable to the patient, and all the areas affected must be treated, especially the exposed areas—namely, the face, hands, and scalp. Because this disease is so inconstant and variable, it may require different methods of attack for the various locations that may be involved with psoriasis. Certain types of remedies work better on certain areas of the body. The study of bizarre manifestations of psoriasis and the examination of those cases in which apparently nonpsoriatic lesions develop into typical psoriasis, may give us some clues as to the cause and the methods of evolution of this puzzling disease.

We would like to call attention to the following salient features of our treatment of psoriasis. We have found that acute generalized psoriasis even in the incipient stages, especially in children, should be treated with soothing applications instead of stimulation. Rest in bed, avoidance of irritation by pressure of clothing and mechanical appliances, freedom from irritation from various causes including occupation, serve to enhance the healing process. Overtreatment and early use of stimulating ointments may result in complications. Cleanliness cannot be overrated, especially for the scaly, crusted, thickened areas. Stimulants such as ammoniated mercury, sulfur, and the tar groups should be confined only to the patches themselves and should not be applied to the unaffected parts because of the possible consequent dermatitis. At this stage, chrysarobin and the newer similar products should be avoided. There is no uniform conventional prescription for this disorder. This is apparent, since psoriasis affects not only the glabrous skin and nails, but

also areas of the skin with hair and oil glands, and the areas with sweat glands such as the chafing of the intertriginous areas of the breasts, perineum, groin, also the hands, feet, and the mucous membranes. Because of the essential parts involved, these will require a special type of treatment adapted to the particular location. Hence the necessity that psoriasis be treated according to the location of the lesions.

One of the most important things is to get the patient to persist in treatment for the proper time—even when but a few areas remain. If patients continue treatment they are much more apt to avoid the severely crusted, fissured, and indurated lesions seen in irregular therapy. Many psoriasis patients have been discouraged over the poor prospect of a complete cure and have been given to understand that they must expect to carry more or less lesions for considerable periods of time. We feel that this is the wrong attitude and that the psoriasis patients should be so handled that they persevere in their routine of treatment. If this is done, patches of chronic, indurated lesions will seldom be seen. We wish to emphasize that the reappearance of even a few or relatively mild lesions should be the signal for immediate treatment with the proper local applications. This method is most apt to result in the final cure. This has been to us, the most satisfactory item of our experience in dealing with this chronic disease. This method entails no more visits to the dermatologist than do the sporadic attempts made to treat the lesions that have been allowed to develop for a considerable length of time.

Much can be done for psoriasis of the scalp and the accompanying borderline lesions of the face. The safest and best ointment for the scalp is a 20 per cent ammoniated mercury in *Ungt. aq. rosae*. The ointment is applied to the skin by parting the hair in the various areas. The patient is told to wash it out in twelve to twenty-four hours. This increases cleanliness, and unquestionably soap and water help a great deal in psoria-

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a grateful response. For psoriasis of the glabrous skin, we alternate the soap treatment with ointment, when indicated, containing the usual stimulants, but with the idea of avoiding more than a mild irritation. It does not appear to us that psoriasis lesions should be very drastically treated and inflamed. Symptoms of irritation should make us think quite early that we do not want to encourage a dermatitis exfoliativa.

We have, of course, used the combined crude coal tar and ultra-violet lamp treatment.<sup>2</sup> Patients do not like to attend to daily treatment, and we believe that much of the good of this method comes from the fact that patients are using applications regularly. We are not so much impressed with the idea that combination of ultra-violet ray and crude coal tar has some special efficacy. To be sure, ultra-violet ray helps psoriasis. However, this seems to be much more effective when the patient is exposed to outdoor sunlight and is indulging in exercise.<sup>3</sup> We have mentioned x-ray. Of course we do not cure psoriasis with x-ray, and we do not give general or regular treatments with it. If x-ray is used more than a few times, its remarkable effect wanes. We, therefore, "save" x-ray and reserve it for the occasionally "sudden thrust" to the unsightly lesions of the face, the borderline area of the scalp, nails, palms, and for giving great comfort to the inflamed lesions of the intertriginous areas. As in most diseases of the skin, x-ray has its place as an adjunct to therapy and not as the sole treatment.

In this paper, we have given little attention to internal treatment.<sup>4</sup> If we have been impressed at all with the dieting measures it has been with the idea that milk is of some value. There are, of course, various reasons for this. We think that reduction of weight is of obvious value in certain patients with psoriasis in the intertriginous areas, and this point may be a most practical one. The reactions to fever temperature caused by various means are sometimes striking. We have an idea that the effect here is really a local one and is not due to any

internal metabolic change. Injection of various proteins—blood, scales, milk, etc.—sometimes produces results which, however, are temporary.<sup>5</sup> Vitamin therapy, either with or without local treatment, has not given us enough evidence to evaluate its use.<sup>6</sup> It seems that arsenicals are now in an unpopular stage, and they, of course, have done harm. It may be said that almost any internal product has been tried in the internal treatment of psoriasis—that speaks for itself. Of course, there is the patient who gets well without treatment, but there is a cause for that and we should study that phenomenon.

What to do about psoriasis? Let us welcome the patient with it and treat him as a challenge to our resourcefulness and not as a weary burden inflicted upon us. If we study and treat each psoriasis patient as an individual problem and not as someone that we dismiss with a prescription for a one-half strength tube of anthralin or some newer product—then we will be giving our public a practical illustration of the value of dermatologic knowledge. Knowing so little about psoriasis, we treat it more with art than with science, not forgetting the need of science for research on this disease. The young dermatologist sometimes does not realize it, but he has in psoriasis his everyday opportunity to show what kind of a practicing physician he is. We hope that these simple observations and suggestions may stimulate a more expectant attitude in our work with psoriasis.

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## Discussion

Dr Rudolph Ruedemann, Jr, Albany—This interesting paper should provoke considerable discussion.

The prevalence of this unsightly eruption, its unknown etiology, and the fact that there are no definite treatment methods that will give us the desired results, make this dermatosis the "bugaboo" of the dermatologists.



sis This ointment may be used once or twice a week after the lesions have largely disappeared, then the frequency of application may be lessened. However, the patient who has had psoriasis of the scalp should use such an ointment once in two to four weeks, even when he is free of all lesions. We seldom find recurrences in the scalp if this regimen is adhered to. Furthermore, it keeps the scalp in good condition as to the seborrheic scaling and similar disturbance. We find that a 1 per cent salicylic acid in 50 per cent alcohol used each night between ointment application is clean, soothing, and very effective. A 3 per cent to 5 per cent liquor carbonis detergens may be added to this. Practically no other drugs are necessary for treatment of scalp psoriasis. We use the x-ray for one or two treatments to the heavy lesions of the scalp and especially for the lesions of the face. The dosage used does not endanger alopecia. If there is an accompanying seborrheic crusting around the ears we use wet dressings.

Psoriasis in the intertriginous areas of the breasts, axillae, perineum, natal cleft, and on the scrotum and glans penis, is best treated by use of wet dressings and frequent use of soap and water. A thorough lathering is desirable and we think there is some advantage in tar soap. If the patient is encouraged to wash thoroughly with a well-soaped wash cloth in the perineum and groin morning and night it will be found most effective. We have found that many patients neglecting this observance have constantly recurring trouble. If an ointment is prescribed it should be one of ammoniated mercury, sulfur, or crude coal tar, and should be worked in at nighttime and immediately wiped off. We do not have the patients walk about when the ointment is applied. The parts are to be well powdered when the patient is up and about. We do not use salicylic acid or any of the chrysarobin groups in these areas. This may be the place to mention that we feel that regular soapy applications are good for psoriasis in any area, granted that a real eczematous dermatitis is not present

and the patient is not sensitized to soap. When we come to the treatment of the dry indurated lesions we find that alternating applications of soap and water and ointments are most effective. In any skin disease, application of an ointment to any indurated or chronically affected area is much more effective if it follows immediately after wet dressings have been used continuously for an hour or two.

This wet dressing process is especially effective in the treatment of obstinate lesions of the palms and soles. The palmar lesions of psoriasis are, of course, sometimes not easily diagnosed. Every dermatologist has seen what he has considered an eczematous infiltration change into one he can recognize as psoriasis. Ringworm and syphilis are not so difficult to differentiate. One should always suspect persistent palmar lesions to be psoriasis. The nails may give some clue to diagnosis. Often, occupation irritating the psoriasis and causing some pressure keratinization becomes a complicating factor and leads one to miss the psoriasis diagnosis. We find that in this type of palm a preliminary dose of x-ray, possibly repeated in one month, gives a local application the best opportunity to succeed. We find that a 5 per cent salicylic acid added to a 5 per cent crude coal tar ointment worked into the palm and then wiped off is the most effective local treatment. It is best applied at night, and in obstinate cases it is used following a wet dressing. It is well to remember that pressure always aggravates psoriasis. These patients should wear gloves and avoid all irritation if possible. There are, to be sure, many other applications that are useful, but we have never found any that compare with this scheme of treatment.

The psoriatic nail should be softened by applications of salicylic acid or ammoniated mercury applied overnight under finger cots. Here, x-ray is definitely of value. In women who have the mild and yet annoying cosmetic lesion of the finger nails, the use of x-ray and radium at very infrequent intervals secures

a grateful response For psoriasis of the glabrous skin, we alternate the soap treatment with ointment, when indicated, containing the usual stimulants, but with the idea of avoiding more than a mild irritation It does not appear to us that psoriasis lesions should be very drastically treated and inflamed Symptoms of irritation should make us think quite early that we do not want to encourage a dermatitis exfoliativa

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One point that this paper brings up seems worth emphasizing—the attitude one is prone to assume when he sees a patient with psoriasis. He gives rather an unfavorable prognosis, does not encourage the patient as to the treatment results, and the patient feels immediately the hopelessness of the situation. These patients are definitely discouraged at the outset because the disease tends to recur. They have gone from one doctor to another, and they find it rather difficult to convince people with whom they work that it is not contagious.

Then we so often see the patient who has been overtreated. The eruption has been precipitated into a generalized dermatitis. In spite of repeated warnings, we still see palmar "arsenical-keratosis" following the prolonged use of Fow-

ler's Solution. X-ray and radium do give marvelous results in solitary lesions—perineal and perianal regions—but they are dangerous weapons in the hands of those not familiar with the aftereffects. One still sees x-ray dermatitis with its deplorable atrophy and atrophic ulcers, resulting from misjudgment on the part of the x-ray therapist.

The treatment of psoriasis is still a gamble but we have at our disposal various methods of treatment with which results may be attained, and we may assure the patient of some relief.

I believe that it is up to us to encourage the patient. If the dermatologist cannot get results, it is not our purpose to drive these patients who like the drowning man are willing to grasp at a straw, into the hands of a charlatan.

### GOOD TASTE IN SIGNS

"Are Neon signs ethical?" This question was raised recently by several physicians in Indiana, and was referred by the Indiana State Medical Association to its Bureau of Publicity, which was authorized by the House of Delegates of that Association to give opinions on certain matters involving the principles of medical ethics.

Here's what the Bureau said:

"Of course a great deal depends upon the size, the location, and the prominence of such signs. A sign does not have to be a neon sign to be in bad taste. Lettering on an office window or a door which is over-conspicuous in size or in coloring is bad taste and hence unethical. If all the physicians in a town use a sign of the same size it would not be unethical, but if one physician used a neon sign and the others did not use neon signs, that would give undue prominence to one physician's name, and hence the Bureau feels that the use of a neon sign in this instance would be a breach of local custom and therefore unethical."

In our opinion, the Bureau hit the nail on the head when it said:

"A sign does not have to be a neon sign to be in bad taste." Have you ever noticed a sign out side a physician's office which was far from being in good taste? We have.

The Principles of Medical Ethics of the American Medical Association states in Chapter 3, Section 4, "It is unprofessional to employ any methods to gain the attention of the public for the purpose of obtaining patients." In that same section also appears the following: "The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity." This is a fundamental truism in ethics.

"John G. Jones, M.D.," a plain, dignified, in conspicuous, lettered sign, without embellishments, in our opinion is the only appropriate sign for a physician.—*Ohio State M J*

### TUBERCULOSIS IN ELDERLY PEOPLE

It is a well-known fact that the tuberculosis death rate is high among young people but many do not realize that it is also very high among old people. There are more cases of tuberculosis among those persons in the twenties than in the teens, more among those in the thirties than in the twenties, and at the age of fifty, for the number of persons living, the incidence of reinfection type of tuberculosis is higher than any other period of life. Every elderly person who has frequent colds, a so-called chronic bronchitis or asthma, should have a careful chest examination. Because of an atypical type seen in older people repeated sputum examination should be made. Due to the frequency of tuberculosis in this group and their intimate contact with children, considerable infection is spread by them.—*John E. Nelson, M.D., Seattle, Wash. Northwest Med*

### COOK IT THOROUGHLY

Improperly cooked pork is believed to have been responsible for 9 cases of trichinosis which occurred among persons who attended a church supper in Potsdam, St. Lawrence County.

Seven of those affected became ill between November 1 and 15, and 2 cases developed more recently. All nine had partaken of a pancake and pork sausage supper which was served October 25 to about one hundred persons. All had eaten the sausage and three stated that they had eaten no other pork recently. The pork from which the sausage was made was obtained from one individual whose pigs are fed raw garbage collected in the village of Potsdam.

Fresh pork, provided it is thoroughly cooked, is a safe food. Thorough cooking will destroy any trichina worms that may be encysted in the meat.

# THE TEACHING AND PRACTICE OF NEUROLOGY AND PSYCHIATRY IN THE OUTPATIENT DEPARTMENT

NOBLE R. CHAMBERS, M D , Syracuse, N Y

ONE of the notable changes in modern medical teaching is in the increasing use of the dispensary or outpatient department for such purpose. The writer's experience dates back to 1918-1920 as a student, 1921-1923 as an intern and postgraduate student, and since January, 1924, as a neuropsychiatrist in private practice. I would like to relate some pertinent experiences, at the same time tracing the development of the outpatient department teaching of neurology and psychiatry in Syracuse.

If my memory serves me correctly there was no separate clinic for neurology and psychiatry in my student days. Junior students took histories and did physical examinations in the medical clinic at the Syracuse Free Dispensary, occasionally, of course, seeing a neurologic or psychiatric case. Checking was done by practicing physicians on the dispensary staff. There was a rare opportunity to do a lumbar puncture, under supervision, of course. While an intern, I was afforded an opportunity to work at the Rhode Island Hospital outpatient department in neurology and psychiatry. After internship came alternate days between the Rhode Island Hospital and the Massachusetts General Hospital outpatient departments. Then followed an experience at various clinics as a postgraduate student in neuropsychiatry at the University of Pennsylvania. Here and at the Massachusetts General Hospital there were conferences and a sincere teaching effort, particularly in the clinics of Drs Wm G Spiller, T H Weisenburg, Edward Strecker, and James B Ayer. Then came Syracuse and an opportunity to work at the Syracuse Free Dispensary, which is staffed by the Syracuse University Medical College.

There were two clinics a week in neurology and psychiatry, both types of cases being treated in each clinic. I soon fell into the habit which I had criticized as a student—too much hurry and sacrifice of quality for quantity. I am sure my students of those days would agree that the student had little opportunity to investigate thoroughly and follow up a patient. With the assistance of a well-trained psychiatric social worker, however, an appointment system was worked out and conditions improved substantially. Then in 1931 the Syracuse State Psychopathic Hospital was built and the neuropsychiatric clinic was transferred there. The psychiatric clinic remains there today and I shall speak of that later. Neurology was returned to the Syracuse Free Dispensary where it operates today under the department of internal medicine. I believe that there has been a decided improvement in both clinics, both from the point of view of the clinic physician and from that of the student. The criticisms which your speaker had noted were noted by others. Dr H A Steckel, Director of the Psychopathic Hospital and Professor of Psychiatry, has made many improvements in the teaching done by this department. Dr J G Fred Hiss has reorganized, or shall I say, is reorganizing the work of the department of internal medicine at the Syracuse Free Dispensary with a thought not only to the patient's welfare but also to that of the student and the physician teacher.

Let us consider for a few moments the evolution of the present system of the teaching of neurology in the Syracuse Free Dispensary. Since it became a part of the medical clinic there has been one clinic a week. New cases are first

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 26, 1939*

One point that this paper brings up seems worth emphasizing—the attitude one is prone to assume when he sees a patient with psoriasis. He gives rather an unfavorable prognosis, does not encourage the patient as to the treatment results, and the patient feels immediately the hopelessness of the situation. These patients are definitely discouraged at the outset because the disease tends to recur. They have gone from one doctor to another, and they find it rather difficult to convince people with whom they work that it is not contagious.

Then we so often see the patient who has been overtreated. The eruption has been precipitated into a generalized dermatitis. In spite of repeated warnings, we still see palmar "arsenical-keratosis" following the prolonged use of Fow-

ler's Solution. X-ray and radium do give miraculous results in solitary lesions—perineal and perianal regions—but they are dangerous weapons in the hands of those not familiar with the aftereffects. One still sees x ray dermatitis with its deplorable atrophy and atrophic ulcers, resulting from misjudgment on the part of the x ray therapist.

The treatment of psoriasis is still a gamble, but we have at our disposal various methods of treatment with which results may be attained and we may assure the patient of some relief.

I believe that it is up to us to encourage the patient. If the dermatologist cannot get results, it is not our purpose to drive these patients who like the drowning man are willing to grasp at a straw, into the hands of a charlatan.

## GOOD TASTE IN SIGNS

"Are Neon signs ethical?" This question was raised recently by several physicians in Indiana, and was referred by the Indiana State Medical Association to its Bureau of Publicity, which was authorized by the House of Delegates of that Association to give opinions on certain matters involving the principles of medical ethics.

Here's what the Bureau said:

"Of course a great deal depends upon the size, the location, and the prominence of such signs. A sign does not have to be a neon sign to be in bad taste. Lettering on an office window or a door which is over-conspicuous in size or in coloring is bad taste and hence unethical. If all the physicians in a town use a sign of the same size it would not be unethical, but if one physician used a neon sign and the others did not use neon signs, that would give undue prominence to one physician's name, and hence the Bureau feels that the use of a neon sign in this instance would be a breach of local custom and therefore unethical."

In our opinion, the Bureau hit the nail on the head when it said:

"A sign does not have to be a neon sign to be in bad taste." Have you ever noticed a sign outside a physician's office which was far from being in good taste? We have.

The Principles of Medical Ethics of the American Medical Association states in Chapter 3, Section 4, "It is unprofessional to employ any methods to gain the attention of the public for the purpose of obtaining patients." In that same section also appears the following: "The most worthy and effective advertisement possible, even for a young physician, and especially with his brother physicians, is the establishment of a well-merited reputation for professional ability and fidelity." This is a fundamental truism in ethics.

"John G. Jones, M.D.," a plain, dignified, in conspicuous, lettered sign, without embellishments, in our opinion is the only appropriate sign for a physician.—*Ohio State M J*

## TUBERCULOSIS IN ELDERLY PEOPLE

It is a well-known fact that the tuberculosis death rate is high among young people but many do not realize that it is also very high among old people. There are more cases of tuberculosis among those persons in the twenties than in the teens, more among those in the thirties than in the twenties, and at the age of fifty, for the number of persons living, the incidence of reinfection type of tuberculosis is higher than any other period of life. Every elderly person who has frequent colds, a so-called chronic bronchitis or asthma, should have a careful chest examination. Because of an atypical type seen in older people repeated sputum examination should be made. Due to the frequency of tuberculosis in this group and their intimate contact with children, considerable infection is spread by them.—*John E. Nelson, M.D., Seattle, Wash. Northwest Med*

## COOK IT THOROUGHLY

Improperly cooked pork is believed to have been responsible for 9 cases of trichinosis which occurred among persons who attended a church supper in Potsdam, St. Lawrence County.

Seven of those affected became ill between November 1 and 15, and 2 cases developed more recently. All nine had partaken of a pancake and pork sausage supper which was served October 25 to about one hundred persons. All had eaten the sausage and three stated that they had eaten no other pork recently. The pork from which the sausage was made was obtained from one individual whose pigs are fed raw garbage collected in the village of Potsdam.

Fresh pork, provided it is thoroughly cooked, is a safe food. Thorough cooking will destroy any trichina worms that may be encysted in the meat.

order to maintain their interest I decided on the plan of having these assistants see the new cases and check with them the following week. At present our new case intake is limited to four per week making two for each assistant. He, of course, follows his cases on an appointment basis.

Let us now discuss the outpatient department teaching in psychiatry. A few years ago Dr. Steckel asked some of us who were specializing in the private practice of psychiatry to take about eight clinics a year in an effort to give the senior students an idea of the extramural practice of psychiatry. There are about five students in each group. My own method is to make appointments for selected cases from my regular clinic at the Psychopathic Hospital and present these cases to the students, considering chiefly diagnosis, prognosis, and treatment. This is followed by a description of the field of extramural psychiatry including psychoses, mental defectiveness, epilepsy and the psychoneuroses, mental hygiene, and child guidance and delinquency. Particular stress is laid upon the psychoneuroses—the patient who after a thorough history and examination is all too often told “You imagine it all—go home and forget it.” True, we are not dealing with organic pathology in these cases, but if we consider for a moment the function of the vegetative nervous system, which is very briefly the control of the viscera and circulation and knowing that it is affected by emotions either acute or chronic, can we not explain the bizarre symptomatology presented by these patients? If the student realizes this and later, when he becomes a physician, makes an effort to reach the patient through drugs, endocrines, or particularly an effort to alter the emotional content of the patient's life, we believe that many patients will not turn to cultists. At various times senior and graduate students in psychology and sociology, divinity students, and ministers visit the clinics and, I believe, gain something therefrom. Some act as volunteer assistants in social investigation and psychometric examinations.

A few words about the preparation of the student for the outpatient department work at Syracuse University Medical College. Neuroanatomy is studied in the freshman year and neurophysiology the second year. A course in neuropathology is studied along with pathology in the second year, also a course in physical diagnosis. Clinical neurology and clinical neuropathology are taken up in the junior year. Courses in psychiatry are given in the second, third, and fourth years. Bedside work in neurology and psychiatry is considered in the fourth year in clerkships. Each senior makes a thorough study of a case, including home investigation.

I have attempted to give you a word picture of the outpatient department teaching and practice of neurology and psychiatry as I have experienced it. Certain conclusions can be drawn therefrom and suggestions made.

1. There is still much to be desired.

2. Organic neurology should be taught to seniors rather than juniors and the course in physical diagnosis should include the neurologic examination.

3. More time should be allowed so that the student has time for a complete neurologic examination.

4. We do not try to make neurologists out of students but we do expect them to be able to take a good neurologic history, do a good neurologic examination, and interpret it intelligently.

5. There is need for more psychiatric social service investigation.

6. With proper facilities both the neurologic and psychiatric outpatient department can be used to great advantage for the teaching of medical students, for the teaching of physicians who wish to work in the clinic, for postgraduate courses, and also for the teaching of sociology, psychology, and divinity students.

7. Our own outpatient department work in both divisions to a large extent, is in conflict with the oft-heard cry of the medical profession “the patient's choice of physician.” But with this situation I have no quarrel as I believe that in the

seen by the ex-medical resident of the University Hospital of the Good Shepherd. Organic neurologic cases are referred to the neurologic clinic. Cases are also referred from the other clinics. At first there were about fifteen junior students working at the clinic. If the neurologist found something of interest such as third, sixth, or seventh nerve involvement, tremor, or clonus he would demonstrate it to the students who worked in groups of two. This then meant that he had to rout out several pairs of students. The result was like the "clam chowder through which the clams walked with rubber boots on." Then a day was set aside for neurology. The students continued to work in pairs. The teacher assigned a case—usually a new one to each group for history and neurologic examination as well as such physical examination as was indicated. The whole group assembled for the last half hour during which one previously selected pair of students presented their case. The professor of internal medicine, under whom the department of neurology maintained their clinic, wanted the students to learn how to write a neurologic history and do a neurologic examination, but I must confess I did not exactly obey orders, for in these half-hour discussions we discussed etiology, pathology, signs and symptoms, differential diagnosis, treatment, and prognosis, even though the students were only juniors. I continue to teach this way because I thoroughly believe the student's interest is better maintained. This plan, bad as it was, was a dawning of a better day. Its faults were obvious. In addition to running the clinic I had to check each pair of students and their case, select the case to be presented, and then discuss the chosen case—all in a period of two hours. Just before this, Dr. Hiss had been given charge of the medical clinic. Larger quarters were obtained and I was given carte blanche as far as the neurologic clinic was concerned. One of my colleagues in neuropsychiatry agreed to help, so while one of us had the teaching clinic the other was in charge of the regular

clinic. An appointment basis for patients was arranged. Old cases were used for teaching rather than new ones. My colleague believes in the method of assigning several cases each day. The students are juniors and work in groups of two, the entire group now not exceeding ten. The speaker presents one case to the entire group—one pair of students being responsible for the history and examination which are taken and made in the presence of the physician and the rest of the group. Anyone can interrupt at any time. The last forty-five minutes are reserved for presentation. The professor of neurology holds us responsible for the only teaching which that department presents on multiple sclerosis, syphilis of the central nervous system, extrapyramidal syndromes, and vascular lesions of the nervous system. The students consider these cases as new cases except that they are to take a progress note. They also write the prescription which the teacher, of course, must sign. They are told the week previous what the subject for the following week's presentation will be and are expected to read it in their textbook. At the time the case is presented they are given references to literature and newer methods of treatment. The students do the neurologic examination themselves after having been shown how. You cannot learn to play golf by watching the other fellow. They do a fairly complete examination except that there is little time for a complete sensory examination. Objective tests for taste and smell are not always done nor are complete examinations made of the optic and auditory nerves in which they receive instruction in their senior year. The first session of each group is devoted to a review of neuroanatomy and physiology as applied to the neurologic examination.

Soon after the neurologic clinic became a part of the medical clinic another phase of teaching entered the situation. There were physicians working in the medical clinic who desired to work in neurology. These men serve as assistants. At first they saw the old chronic cases but in

in a special section of this New York State Medical Society Meeting

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I wholeheartedly agree with everything he has said.

It seems to me he has struck an important keynote in our education program when he emphasizes the value of "quality over quantity." There is no question in my mind but that a few cases studied and discussed in a thoroughgoing manner gets far better results than does a superficial review of a large number.

The time element, however, is always an important factor and with an already overcrowded curriculum it is often difficult to cover the ground satisfactorily.

So far as psychiatry is concerned, the situation at Syracuse has been met this past year. We now complete our didactic instruction in the second year so that more time will be available for case contact for the third-year classes.

Dr Chambers' recommendation that more social service investigation be made possible in our psychiatric teaching program will be followed out with the small clinical groups of third-year students beginning in the 1939-1940 school session and students will be required to make more and better personality and environmental studies than has heretofore been possible.

In closing, I should like to record my appreciation for the excellent support the neurologists and psychiatrists in private practice in Syracuse have afforded us in our teaching program, and to express my hope that the same cordial relationship which we have enjoyed in the past may continue unabated in the future.

#### SICKLE SWISHES A BIT FASTER

A little higher death rate in 1939 for the United States than in 1938 is forecast in provisional figures for the first six months of 1939 given in *Public Health Reports* (Washington), but we are assured that although the death rate from all causes, 11.2 per 1,000 estimated population, for the first 6 months of 1939 was 2.8 per cent higher than the corresponding rate, 10.9, for 1938, the health of the nation, in so far as it is measured by mortality rates, has been well above the average of immediately preceding years. Some increase in the death rate compared with that for 1938 was to be expected, since the lowest rate in the history of the death registration area was recorded in 1938. The mortality rate from all causes during the current half year is 6 per cent less than the corresponding rate for 1937.

The cause of death with the largest numerical increase was heart disease, which accounted for 8 per cent more deaths than in the previous year. Influenza with an increase of 65 per cent over the first 6 months of 1938, registered the largest relative increase. However, the influenza death rate for the first 6 months of 1938 14.5 per 100,-

000 population, was unusually low, so that the rate for 1939, 23.9 per 100,000 population, was still low when compared with the average of preceding years and, indeed, was only slightly more than one-half the rate for 1937.

Decreases of varying magnitude were reported for the other causes of death. The death rate from the principal communicable diseases of childhood, measles, diphtheria, scarlet fever, and whooping cough, was appreciably less than for 1938. Especially gratifying were the continued declines in the mortality rates from tuberculosis and diseases of pregnancy and childbirth. The death rate from tuberculosis, 47.3 per 100,000 population, decreased 3 per cent and will apparently be definitely below 50 per 100,000 population at the end of the year. The maternal mortality rate reached a new low of 4 per 1,000 live births, this represents a decline of 23 per cent since 1937.

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case of the indigent they are badly needed for teaching material, and that free choice would soon leave our clinics suffering for lack of material

8 The single case method seems preferable in neurology

9 The outpatient department offers the student the nearest approach to office practice—a fact which I realized as a student. No wonder it finds increasing use for teaching purposes

In conclusion, let me say that the best results can be obtained only when a physician likes to teach and enters into it with enthusiasm, and is as faithful to his dispensary work as he is to his private practice

## Discussion

Dr J G Fred Hiss, *Syracuse, New York*—As Dr Chambers and I are associated at the dispensary there is naturally no great difference in opinion regarding the methods discussed in his paper. Therefore, I should like to stress a few points that he made or implied in his description

First, I feel that it is absolutely fundamental that the technic of a simple neurologic examination be taught in the physical diagnosis course in the second year. I am afraid that only too often we give students the impression that a complete examination of the body consists of examining the heart and lungs, calling in various specialists to look at the nose and throat, and making a special neurologic examination. In order to impress the students that we are dealing with the body as a whole, I feel that the teacher in physical diagnosis should teach all of these things, leaving only the more advanced examinations to be taught later on in the course by the proper specialists

Secondly, I believe that third-year students should get their introduction into clinical medicine in the hospital rather than in the dispensary or outpatient department. In hospitals, patients usually have well-developed pathology or are suffering from the more acute conditions which are comparatively easy to recognize. Furthermore, the patient is available for a much longer period of time. If the student is somewhat puzzled on his first examination he can read about it at home during the evening and re-examine the patient the next day. This can be repeated any number of times until the case is properly worked up. At the dispensary, on the other hand, we have many patients with early or

obscure pathologic changes. The time is very limited and the case load that must be taken care of is usually very heavy

In the third year the student is more interested in methods, while diagnosis and differential diagnosis are of secondary importance

Third-, senior-, or fourth-year students should be assigned to work in the outpatient department because of the reasons stated above. I feel that in general the value of outpatient department teaching has escaped proper evaluation. It is not generally recognized that one can follow essentially the same methods that have been adopted in the teaching of physiologic, pharmacologic, pathologic, and the other basic sciences, namely, that the material can be arranged in a logical and correlated order

For examination in pathology, students are assigned a lesion dealing with nephritis. They have a lecture on nephritis, they see gross specimens illustrating types of nephritis, and then they study microscopic sections illustrating the various types of nephritis. If the professor classifies his material in an outpatient department, it is possible to assign a definite subject for students to read and then show them cases illustrating this same subject. One can, for instance, assign the subject of cerebral spinal fluid and then arrange his appointments so that on the day of discussion he will have several patients illustrating this condition available in the clinic. In this way it is possible to tie up the didactic and the clinical work so that it becomes a very definite and concrete subject to the student, rather than merely another lesson to be studied or another case to be seen.

At present our students are assigned to this type of work for about forty-five days and our aim is to show them the 45 most common or most important types of disease that are encountered in an outpatient department. This, of course, requires careful diagnosis and classification of cases by the physicians who carry the case load of the various clinics. The appointment system is, of course, also essential

I might say that this does not comprise all of our medical teaching in the dispensary. Students are also assigned, at another time, new cases to work up completely. Both of the types of teaching here mentioned, I believe, are essential to the complete rounding out of the student's medical education. By this arrangement not only do the students benefit greatly, but the advantages are even greater as far as the patients and attending staff are concerned, as all cases must of necessity be more carefully studied. I feel that it is very commendable that a discussion on teaching methods should be included

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# X-RAY TREATMENT OF INFLAMMATORY CONDITIONS

JOHN RUSSELL CARTY, M D , New York City

SINCE the early days of x-ray therapy there have been occasional reports detailing good results in the treatment of various inflammatory conditions. As a whole, however, until comparatively recently these observations have been isolated and have not attracted much attention. Now the literature has reached such a volume that their significance cannot be overlooked by the radiologist. The literature has been well summarized in many of the recent papers. In this report our aim is to detail our experience in the treatment of inflammatory conditions for the past twelve years. As is the case with any new agent there is usually an uncritical selection of cases, and, of course, under these conditions the results may be disappointing. The method may undeservedly come into disrepute. In addition to a proper selection of cases there are certain details that must be seriously considered if good results are to follow.

The theories regarding the action of the x-rays on infected tissues are many. A lengthy theoretical discussion of them would not be profitable. The theory that postulates a partial leukocytic destruction by the radiation, thus liberating antibacterial substances seems attractive. I seriously doubt if there is a direct action of the radiation upon the bacteria themselves. As one might expect, the more acute the process the more dramatic the result. On the other hand, a long-standing process requires a longer time and more treatment for a favorable resolution. There is often a marked suppuration following x-ray therapy. Wherever possible the pus and debris should be given an exit as soon as possible as it shortens convalescence and diminishes toxicity.

There is a feeling now that the dosage

of x-rays used is an important and even decisive factor, particularly in the acute processes. In my early work in this field I would encounter an occasional case where the x-rays had apparently aggravated the process. In most of these instances the dosage was relatively large. A recent work with rabbits by Tuggle and Angevine has shown that the spread of certain artificially produced infections may be actually facilitated by large doses of x-radiation. This is particularly true with acute infections. With long-standing infection the question of the size of the dose is not so critical. It is my opinion that in most instances the therapy should be administered by the radiologist working in close cooperation with the surgeon. This applies particularly in the more extensive and serious inflammatory lesions such as gas gangrene, carbuncles, otitis media, etc.

Favorable results may be expected in a goodly percentage of selected cases of sinusitis. I do not believe that x-ray therapy will in most instances stop a discharge but it will alleviate pain particularly in those cases where there has been operative interference without relief. There is usually a shrinkage of the mucous membrane about the ostia which permits of drainage. However, the infected mucous membrane may still remain. The shrinkage about the ostia is usually preceded by a preliminary swelling. This swelling may cause an exacerbation of the pain two to twelve hours following treatment. The possibility of this should always be explained to the patient and when it occurs it is generally indicative of an eventual good result.

Excellent results may be obtained in the case of boils with small doses of x-ray. The boil suppurates very rapidly, sometimes in less than twelve hours, saving

the patient a great deal of pain and suffering. If treated early enough suppuration may be avoided.

With carbuncles the toxicity is diminished. This effect is often striking. In one extensive carbuncle of the face the patient became markedly brighter and less toxic two hours after the first treatment. It softens up and may drain spontaneously or be amenable to relatively simple surgery. In my opinion x-ray therapy is a method of choice in carbuncles of the face. If there is a sinus thrombosis the x-ray therapy will not modify the eventual fatal outlook.

Good results have been reported following x-ray therapy for gas gangrene. The disease may be held in check and radical surgical measures may not be needed. If, however, there is an underlying diabetes or arteriosclerosis, the response is poor.

Excellent results may be obtained in the treatment of phlebitis, particularly of the long drawn-out wandering type. Often weeks of tedious convalescence may be avoided. Occasionally, a chronic ulcer due to varicose veins may heal following x-ray therapy. A recurrence later is apt to happen. Best results are seen where there is not an associated arteriosclerosis.

Bursitis responds well, particularly the very acute type. In fact, I believe better than by the use of heat. With this exception, however, we prefer to have heat tried before x-ray. In certain cases puncture and withdrawal of fluid in addition to x-ray may be helpful.

At present there is not sufficient evidence in my opinion to justify any conclusions regarding the x-ray therapy in acute lobar pneumonia. On the other hand, I have had excellent results with certain chronic pneumonias, particularly those in children. Serial radiographs of the chest are made to check the results of treatment. My experience in treating bronchiectasis has not been so good as those expressed by some other observers. Occasionally one may see a gratifying reduction in the amount of sputum. It is very important to keep a close watch on

the blood count as a severe anemia may occur within a few days during therapy, in this condition. One must also be careful not to push the treatment too vigorously for fear of producing pneumonia. However this is contrary to the experience of some others.

The results of x-ray therapy on enlarged inflammatory lymph nodes, particularly in children, are excellent. Many times a quick reduction in size will take place without pus formation. If there is fluctuation before treatment the nodes will break down more rapidly. There is often a marked reduction in the fever and general toxemia. Any focus of infection such as the tonsils should be removed as soon as the infection quiets down.

Excellent results are seen in the x-ray therapy of chronic inflammatory lymph nodes. A much longer time is usually needed before good effects are apparent. This is particularly so where there is an inflammatory mediastinal enlargement secondary to exanthemata, whooping cough, or upper respiratory tract focus of infection. These patients often have a persistent, dry, brassy cough which may last for months and give rise to apprehension. They are usually anemic and do not gain in weight. Parents should be warned concerning the likelihood of exacerbation of symptoms following the first few treatments. It may take as long as four months before a cure is reached.

The x-ray therapy of middle-ear disease has received attention. Some observers state that operation may at times be avoided in the acute type of otitis media and mastoiditis. I have seen a year-old discharge stop following treatment. More evidence is needed here before drawing conclusions.

The x-ray therapy of herpes zoster is very effective and deserves more attention. We treat over the ganglion and often along the nerve distribution of an affected ganglion. The sooner the patient is treated following the onset of the disease the better are the results. Age to a certain extent plays a part in the results. It has been our experience that the younger the patient the better are the

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JOHN RUSSELL CARTY, M D , New York City

SINCE the early days of x-ray therapy there have been occasional reports detailing good results in the treatment of various inflammatory conditions. As a whole, however, until comparatively recently these observations have been isolated and have not attracted much attention. Now the literature has reached such a volume that their significance cannot be overlooked by the radiologist. The literature has been well summarized in many of the recent papers. In this report our aim is to detail our experience in the treatment of inflammatory conditions for the past twelve years. As is the case with any new agent there is usually an uncritical selection of cases, and, of course, under these conditions the results may be disappointing. The method may undeservedly come into disrepute. In addition to a proper selection of cases there are certain details that must be seriously considered if good results are to follow.

The theories regarding the action of the x-rays on infected tissues are many. A lengthy theoretical discussion of them would not be profitable. The theory that postulates a partial leukocytic destruction by the radiation, thus liberating antibacterial substances seems attractive. I seriously doubt if there is a direct action of the radiation upon the bacteria themselves. As one might expect, the more acute the process the more dramatic the result. On the other hand, a long-standing process requires a longer time and more treatment for a favorable resolution. There is often a marked suppuration following x-ray therapy. Wherever possible the pus and debris should be given an exit as soon as possible as it shortens convalescence and diminishes toxicity.

There is a feeling now that the dosage

of x-rays used is an important and even decisive factor, particularly in the acute processes. In my early work in this field I would encounter an occasional case where the x-rays had apparently aggravated the process. In most of these instances the dosage was relatively large. A recent work with rabbits by Tuggle and Angevine has shown that the spread of certain artificially produced infections may be actually facilitated by large doses of x-radiation. This is particularly true with acute infections. With long-standing infection the question of the size of the dose is not so critical. It is my opinion that in most instances the therapy should be administered by the radiologist working in close cooperation with the surgeon. This applies particularly in the more extensive and serious inflammatory lesions such as gas gangrene, carbuncles, otitis media, etc.

Favorable results may be expected in a goodly percentage of selected cases of sinusitis. I do not believe that x-ray therapy will in most instances stop a discharge but it will alleviate pain particularly in those cases where there has been operative interference without relief. There is usually a shrinkage of the mucous membrane about the ostia which permits of drainage. However, the infected mucous membrane may still remain. The shrinkage about the ostia is usually preceded by a preliminary swelling. This swelling may cause an exacerbation of the pain two to twelve hours following treatment. The possibility of this should always be explained to the patient and when it occurs it is generally indicative of an eventual good result.

Excellent results may be obtained in the case of boils with small doses of x-ray. The boil suppurates very rapidly, sometimes in less than twelve hours, saving

*Read at the Annual Meeting of the Medical Society of the State of New York  
Syracuse, April 25, 1939*

Dr Arthur F Holding, *Albany, New York*—Dr Carty has covered a large field and has done it well. I have not had an opportunity of reading his paper beforehand, and I may be mistaken, but in enumerating the wonders in therapy that x-ray can accomplish in refractory cases, I wonder if he has protected himself enough by giving sufficient emphasis on the need of using the x-rays only in cases where simpler, less expensive, less dangerous, and less destructive modalities have failed.

As an old family doctor, an ear, nose, and throat specialist, as well as a veteran roentgenologist, I have little sympathy with the all too common modern attitude of "therapeutic nihilism."

We who have devoted our lives to the x-rays must remember that radiology is more a method and technic than it is a specialty—an adjuvant rather than a specific cure. We must avoid being discredited for overenthusiasm.

For instance, in skin lesions it is well to remember the old dictum "skin diseases are divided into three classes—the first, sulfur will cure, the second, salvarsan and mercury will cure, the third, the devil himself cannot cure," and it is in these cases that the x-rays are indicated.

The vast majority of patients with acute sinusitis will quickly respond to colloidal silver with a touch of adrenalin, followed by hot isotonic antiseptic solution douched through the nostrils by suction irrigation, followed by anointing the membrane with oil, and breathing warm

air night and day. It is in the pain and discharge of chronic, refractory sinusitis cases only that x-rays are important curative agents.

In furunculosis, enlarged lymph glands, and chronic eczema I get better results and prefer ultraviolet light first, and only resort to x-rays when the ultraviolet light fails. Never incise a furuncle or carbuncle near any cartilage, especially near the cartilages of the nose or ear. Many an incised furuncle of a nose has been followed by meningitis and death.

In eczema remember success depends largely on excluding the air, cold, and soap and water from the skin no matter what other treatment may be used.

In enlarged lymph glands without sinuses—if they do not get rapidly better or worse (breaking down to point as abscess) after x-ray—surgery gives better results.

In herpes zoster, since I have used anterior pituitary gland extract hypodermatically I have never had to use x-rays for these patients.

In acute mastoiditis I find I need the x-rays in diagnostic dose methods in order to prove that the patients really had mastoiditis because they get well so fast under sulfanilamide. The greatest usefulness for x-rays in mastoiditis is in old chronic running ears that surgery has failed to clear up.

I am merely adding these words of constructive suggestion to Dr Carty's paper in the hope that it will help searchers after truth and save the x-ray specialists from being misunderstood.

#### TAKEN FROM LETTERS SENT TO EAST ST LOUIS RELIEF OFFICE

My husband has worked one shift for about two months and now he has left me and I ain't had no pay since he has gone or before either.

Please send me my elopment as I have a four months old baby and he is my only support and I need all I can get every day to by food and to keep him in close.

I am a poor woman and all I have is gone.

Both sides of my parents is very poor and I can't expect anything from them as my mother has been in bed for one year with one doctor and she wont change.

Please send me a wifes form to fill out.

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I cant get no pay. This is my 8th child. What are you going to do about it?

Sir I am forwarding my marriage certificate and my two children one of whom is a mistake as you can see.

I am writing you to say that my boy was born two years ago and is two years old. When do I get my relief?

I am annoyed to find out you have branded my boy illiterate. Oh! for shame! It is a shame and a dirty like, as I married his father a week before he was born.

In answer to your letter I gave birth to a boy, weighing 10 lbs 1 oz. I hope youre satisfied.

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—St Louis Medical Bulletin

results obtained. As is the case with sinusitis there may be an acute exacerbation of the pain after the first two or three treatments. This is a favorable sign but should be explained to the patient. The poorest results are seen in cases where the patient is beyond fifty and where there is pain although the eruption may have disappeared.

There are many technics used in the treatment of infectious conditions. I do not feel that it is of great moment whether medium wave radiation, that is, 130 KVP, or radiation at 200 KVP is used. We do feel, however, that the amount of radiation given per dose and the size of the port used are of vital importance. In treating acute superficial infections one should not use over 100 r per treatment, preferably 50 to 75. All measurements are given in air to the skin. I do not believe that a 20 by 20 port should be used where the intensity is over 75 r. I do not feel that it is a matter of much importance whether the treatment is given daily or every other day. The radiologist should consider each case on its merit.

The question of filtration apparently does not play a decisive role. I have had excellent results using 200 KVP with 1 mm of copper plus 3 mm of aluminum as a filter. In fact I feel that this technic is superior in the case of sinusitis or enlarged mediastinal lymph nodes. The total dosage in acute infectious processes should be guided largely by the clinical reaction, keeping, of course, below an erythema dose. Many times a total dose of 50 to 100 r will resolve a boil. With chronic infections the intensity per dose may be stepped up and the total dose may be run higher. Here also larger fields can be more safely employed. With chronic infections the period between treatments may be extended to as much as a week.

The following technic has been found satisfactory in the treatment of enlarged tracheo-bronchial lymph nodes in children: voltage—200 KVP, target skin distance—50 cm, filtration—1 mm copper plus 3 mm aluminum. Fifty to 100 r

(measured in air) to the skin are given each treatment depending upon the age and size of the patient. Four treatments will usually suffice but in larger children it may be necessary to give six. They are given at weekly intervals through two ports to the mediastinum, one in front and one in back, one area per treatment.

Wherever possible the application of irritating substances should be avoided. However, I would not withhold the use of x-radiation on this account. With carbuncles of the face, carbolicization may hasten the evacuation of pus and tissue debris.

### Conclusions

X-radiation is a powerful effective weapon in the treatment of many infectious conditions. Incautiously used it is capable of doing harm. Certain precautions to be observed are emphasized.

### Discussion

Dr. Andrew H. Dowdy, Rochester, New York—Dr. Carty has brought to our attention the increasing usefulness of roentgen-ray therapy in the treatment of inflammatory conditions. The mode of action of this type of therapy is not clearly understood. In experienced hands, however, there is no question of its beneficial effect. A partial destruction of the infiltrated leukocytes, especially lymphocytes, seems certain. Desjardins postulates a subsequent release of ferments and antibodies from these disrupted cells. There is a secondary increase in phagocytosis. The work of Warren and Syvertson definitely indicates that bacteria are not destroyed *in vitro* by the direct action of roentgen rays in the therapeutic dosage range. Clinically we have found positive wound cultures for gas bacilli months after the clinical signs and symptoms of the disease have disappeared following roentgen ray treatments.

The essayist's caution regarding dosage is timely. In acute cases small doses are indicated, large doses may be dangerous. Chronicity is no contraindication but the duration of treatment is longer. In chronic cases some degree of local reaction following treatment is a good prognostic sign. Experience plus clinical judgment will determine the size of the dose and the frequency of treatment.

I should like to ask Dr. Carty what his experience has been with pulmonary abscesses and what technic he has found advisable?

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—*St. Louis Medical Bulletin*



# FRACTURES—IN RURAL COMMUNITIES

MAHLON H. ATKINSON, M.D., F.A.C.S., Catskill, New York

WHEN I was invited to read a paper before this body, the subject "Fractures in Rural Communities" was suggested. It was also suggested that perhaps the professional men of the metropolitan district did not realize the difficulties the rural doctors went through in their fracture work.

At first I was at a loss as to what the difference would be in treating fractures in rural districts. It is true that often the rural man cannot obtain all the help and aid that a large institution may offer, but, more to the glory of the rural man, he has learned how to compensate for this.

Fractures in rural communities are just as much an economical problem as they are in the city. In the rural districts, just as in the metropolitan areas, there has been a much greater number of fractures in late years than in past years—due to the advent of the automobile.

The fractures are more violent, there are more open, compound fractures, more comminuted, more fractures of the skull, and much more injury to the nerves, muscles, blood vessels, tendons, and underlying organs.

The rural doctor must treat these fractures or have them treated, with the same purpose that his metropolitan colleague has, namely, to get as perfect a result as possible with as little financial loss to the patient as possible, and here is where the great difference lies between the rural doctor and the man in a large metropolitan medical center.

In the rural district the doctor lives with the patient, and all the patient's relatives and friends. Everybody knows that John Smith has broken his leg and that doctor so-and-so is looking after him. Usually the entire responsibility

is on the doctor's shoulders. Seldom does a patient ask his rural doctor to call consultants. He places himself in his doctor's hands and with a blind, loyal faith, offers no suggestions nor questions his judgment. He simply believes that the doctor will get him out of his trouble. Whatever may be the result of the treatment, the doctor must gaze upon that leg the rest of his days. He will see John Smith perhaps everyday for years and years, and will be facing John Smith's relatives and friends. There is no getting away from it. The doctor, then, knows from the very beginning that it is his responsibility and that he must obtain a good result.

What then is the result? The rural man has prepared himself to depend to a great extent on his own judgment, ability, and ingenuity.

Throughout the rural districts of New York State a gradual change has occurred. It is seldom that one meets the type of doctor so often visualized as the country doctor. Young, energetic, well educated, and exceptionally well-trained men have taken his place. Men who are able to step into any hospital and show an ability and versatility that would enlighten many of our metropolitan colleagues.

There is a much better cooperation between the medical profession, the surgeon, and the layman. Boy Scouts, industrial first-aid teams, etc., have learned the value of proper, immediate splinting, and what is more important, have learned that when it is possible, they should leave the injured person alone until the local doctor arrives on the scene. The fact that so often a doctor is called to the scene in rural districts has been of utmost importance in the aftertreatment of the injured leg, arm, back, etc.

*Read on Fracture Day of the New York and Brooklyn Regional Fracture Committee of the American College of Surgeons, February 25, 1938, at Lenox Hill Hospital, New York City*

The doctor is able to give the all-important first aid. He takes charge of the situation. He examines the person and determines what has been injured and to what extent. The doctor knows the value of keeping an individual with a fractured back lying prone on the stomach and transporting him that way, even if it is necessary to use a truck. The patient with the fractured back cannot be picked up and crammed, half sitting up, half prone, into the back seat of a car, finishing the damage to the cord. Such is the usual procedure of well-meaning humanitarians in a city where hospitals exist.

I have had one rural physician tell me that he has used shingles, barrel staves, cigar boxes, orange crates, pieces of spare tires, pieces of tin, and other miscellaneous articles to splint a fracture for transportation. But he always splinted it.

Up to three or four years ago the district which I represent was very rural. The nearest hospital was thirty-five miles from my own town and seventy or eighty miles from the mountain districts. In the entire county there were about twenty-five doctors, pretty well-distributed, and the surprising fact is that there were approximately 11 x-ray machines scattered among these doctors, which indicated that the rural man wished to visualize his fractures just as the metropolitan man does.

Now throughout the rural districts of New York a great many hospitals have been erected, small efficient institutions. In my own district we have one of the three "State-aided Hospitals," on which the state pays one half of the building and equipping expense, and one half of any deficit. This hospital has fifty beds.

It serves a county of 20,000 inhabitants and has approximately seventy-five hospitalized fractures a year.

Through gifts, mostly complimentary gifts to the doctors, and through purchases, we have equipped this hospital with the most complete fracture-treating equipment that can be obtained. Certain men especially interested in fracture work frequently attend the clinics in New York City. They follow closely various new methods advanced for the treatment of fractures, listening and observing carefully all the pros and cons of each new method until such method has proved its value and has been accepted. Then they come home and practice it. And I can assure you that seldom has a fracture case left our institution without its being in a very satisfactory condition. At times we require the judgment and skill of experienced men from the metropolitan area, which I am proud to state has always been given us without thought of their ultimate recompense.

As to the methods of treating fractures, we have no set procedures. Hip fractures—some we nail, others we still use the Whitman Spica. Femur fractures on many we do an open reduction, on the others we use traction. Lower leg fractures—we use the McMillan reduction machine with the stiman pins.

As I observe the various clinics and fracture work done in your metropolitan centers I can see very little difference in the methods, course, and aftereffects in your fractures from those of ours in the rural districts.

In fact, if there is any difference at all, I believe it to be that the patient gets just a trifle better break in the hands of the rural physician.

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#### "ONE DROP ON THE PILLOW AT NIGHT"

The oldest drug prescription known is a stone tablet of 3700 B.C. bearing directions for making an inhalant for treating a head cold.

#### LIFE IS LIKE THAT

An American doctor owns the only automobile left in Changsha, China, but the roads are so cut to pieces that he can't go anywhere.



Antepartum eclampsia occurred in 40 patients (63.5 per cent), intrapartum in 12 patients (19 per cent), and postpartum in 11 patients (17.5 per cent). The incidence, as given by Hinselmann, was 26, 53, and 21 per cent, while Stander's figures of 53, 25, and 22 per cent, respectively, are more comparable to our experience.

Fifty-nine of our patients were treated during the antepartum period by private physicians, and 4 by the clinic staff of the hospital. The records of the 4 clinic patients indicated that they attended regularly and received adequate prenatal care. Of the 59 private patients, 17 were under the supervision of obstetricians and may be assumed to have received good prenatal care. The remaining 42 patients were treated by general practitioners. Inquiry showed that the last-mentioned group likewise received adequate prenatal care in almost every instance.

Table 2 lists all the previous medical, surgical, and obstetric conditions which were noted in the case histories of the 63 eclamptic patients.

TABLE 2—PREVIOUS CONDITIONS IN 57 ECLAMPTICS

Condition	No. of Cases
Eclampsia	3
Postpartum convulsions (undetermined cause)	1
Pre-eclampsia	1
Kidney disease	4
Right kidney abscess and operation	1
Hypertensive vascular disease	1
Scarlet fever in childhood	1
Rheumatic arthritis	1
Enlarged thyroid (nontoxic)	1
Two 7-month premature living infants	1
Two-month spontaneous abortion	1
First pregnancy—forceps delivery and still birth	
Second and third pregnancies—cesarean sections and living infants	1
Breech stillbirth	1
Diabetes mellitus (10-year duration)	1

In view of an earlier statement by J. W. Williams that patients recovering from eclampsia develop a relative immunity to the disease, it is of interest to note in Table 2 that there were 3 cases of recurrent eclampsia in the series (4.8 per cent). *Predisposition, not immunity, exists.*

Peckham, too, noted recurrence in 4 per cent of a series of cases, and Hinselmann in a collective review found it to be 1.92 per cent. One of our recurrent

cases had her original seizure two years prior to the present illness. During her first experience she was delivered of a 7-month stillborn infant and during the current illness of an 8-month stillborn infant. The second patient with recurrent eclampsia likewise was delivered of stillborn infants following both convulsive episodes. The third patient had had antepartum eclampsia with her last pregnancy four years ago which terminated in a stillborn infant. In addition, the series includes a fourth patient who gave a history of postpartum convulsions of undetermined cause during a previous pregnancy, and a fifth who suffered from pre-eclampsia in a former pregnancy which terminated in an 8-month stillbirth.

Four patients gave a history of pre-existing kidney disease (6.3 per cent), one of hypertensive vascular disease and the delivery of a 7-month stillborn infant, one of an operation for abscess of the right kidney, and one of scarlet fever and probable postscarlatinal nephritis. From the preponderance of kidney disorders in the anamneses of these patients it seems difficult to believe that from an etiologic standpoint their presence was merely coincidental.

Although we recall no mention in the literature of familial predisposition to eclampsia, it is worth noting also that one patient whose sister had died of eclampsia is included in this study. The patient recovered after delivery of a living infant.

## Treatment

In the absence of a known cause specific treatment is impossible. In this institution eclampsia has been treated along conservative lines. A modification of Stroganoff's method is used, wherein morphine, chloral hydrate, and bromides are given with a view to controlling the convulsions. One colonic irrigation is usually given, but repeated irrigations are no longer favorably regarded. Intravenous injections of hypertonic glucose (100 cc. of 50 per cent) and magnesium sulfate solutions (20 cc. of 10 per cent) have been freely used.

# A STATISTICAL REVIEW OF ECLAMPSIA

Based on Twelve Years' Experience in Israel Zion Hospital

FREDERICK WEINTRAUB, M D , Brooklyn, New York

(From the Department of Obstetrics and Gynecology)

**I**N A total of 31,249 pregnant women admitted to the obstetric service of a general hospital from January 1, 1928, to January 1, 1940, eclampsia occurred in 63 patients. This represents an incidence of eclampsia of 1 in 496 or 0.2 per cent, which is less than the lowest figure (0.34 per cent) given by Stander in a collective review. Hinselmann's figures gathered from various sources place the hospital incidence of the disease at 1 in 253.7 patients, or 0.39 per cent. Different writers have found the incidence to range from 0.34 per cent (Reinburg) to 3.44 per cent (Cruikshank). We are unable to offer any satisfactory explanation to account for the unusually low incidence of the disease in this series. Whether prenatal care alone (which is doubtful) or other factors are responsible remains, for the present, an open question.

Eclampsia is universally found to occur more frequently in primiparas. Of the 63 patients in this series, there were 36 primiparas and 27 multiparas. Private cases numbered 59, and service, 4. There was 1 case of twin pregnancy, and this occurred in a multipara. No patient with hydramnios was observed.

During the cold months (from October through March) 39 patients with eclampsia were admitted (61.9 per cent), and during the warm months (from April through September), 24 patients (38.1 per cent). Unsettled and damp weather is usually held to be a provocative factor in increasing the incidence of the disease. The findings herein reported, with some reservations, support this belief. A monthly analysis of this series shows that during the usually damp and unsettled month of April the least number of eclamptic patients was encountered. Dur-

ing the course of 12 consecutive Aprils (1928 through 1939) there was only one such patient. In sharp contrast, however, stands the month of March. During 12 consecutive Marches (1928 through 1939) the maximum monthly incidence occurred (9 cases). Since weather conditions between these two succeeding months are not as greatly different as they are between months more widely separated in the calendar, the frequently mentioned influence of the weather is not borne out, at least with respect to these two months. Harrar, on the contrary, in a ten-year review of eclampsia in New York City, found April to be the month of greatest incidence of the disease, and, since climatic conditions in New York City and Brooklyn are essentially the same, another discrepancy appears for consideration. It is apparent, therefore, that further study is necessary before the exact etiologic influence of the weather in relation to eclampsia can be determined.

TABLE 1 —MONTHLY INCIDENCE OF ECLAMPSIA

		January 1928 to January 1940					
Month	No. of Cases	Jan 5	Feb 7	Mar 9	Apr 1	May 7	June 6
Month	No. of Cases	July 3	Aug 2	Sept. 6	Oct 8	Nov 6	Dec. 4

The youngest patient in this series was 21, and the oldest, 45 years of age. Between ages 21 and 30, there were 45 patients (71.4 per cent), between 31 and 40, there were 15 patients (23.8 per cent), and over 40, there were 3 patients (4.8 per cent).

Forty patients developed eclampsia in the ninth month (63.5 per cent), 10 patients in the eighth month (15.9 per cent), 10 patients in the seventh month (15.9 per cent), and 3 patients in the sixth month (4.7 per cent).

TABLE 4 —MATERNAL MORTALITY OF 63 ECLAMPTICS

Cause	Day	Type	Parity	Age	Procedure
Lobar pneumonia	6th postoperative	Antepartum	Primipara	30	Cesarean
Eclampsia	12 hours after admission	Antepartum	Multipara	29	Undelivered
Lobar pneumonia	3rd postpartum	Antepartum	Primipara	24	Spontaneous
Eclampsia	18th postpartum	Antepartum	Primipara	25	Induction spontaneous
Eclampsia	5th postpartum	Intrapartum	Primipara	22	Low forceps
Eclampsia	6th after admission	Multipara	Multipara	35	Induction spontaneous
Eclampsia	6th after admission	Antepartum	Primipara	27	Induction-spontaneous
Acute cardiac dilatation	3rd after admission	Antepartum	Multipara	39	Attempted induction-undelivered
Eclampsia	3rd after admission	Antepartum	Primipara	24	Undelivered

with intrapartum convulsions, 1 died (8.3 per cent). No deaths occurred in the group of 11 patients with postpartum convulsions (0 per cent).

Under the age of 30 there were 45 patients of whom 6 died (13.3 per cent). In the age group over 30 there were 3 deaths in a total of 18 patients (16.6 per cent).

In the group of 36 primiparas, 6 fatalities occurred (16.6 per cent), and in the multiparous group of 27 there were 3 fatalities (11.1 per cent).

Primiparity and age, therefore, were apparently factors in increasing the mortality in this series. The primiparous labor, being longer and more strenuous, not only exacts greater physical toll from an already embarrassed myocardium but also prolongs the period of subjection of the patient to the action of the eclamptic poison—an action which usually abates rapidly after delivery. The correlation between the older age group and the higher mortality rate is perhaps explicable on the basis that pre-existing hypertensive and kidney disease is likely to be more advanced in that group.

There were 21 stillborn infants, giving a mortality rate of 33.3 per cent. One infant died seven days after delivery.

### Summary

1 In a total of 31,249 pregnant women admitted to the obstetric service of a general hospital from January 1, 1928, to January 1, 1940, eclampsia occurred in 63 patients, or 1 in 496 (0.2 per cent). Others report an incidence ranging from 0.34 to 3.44 per cent.

2 Of the 63 patients, 36 were primiparas, and 27 multiparas. There was 1 case of twin pregnancy, and none of hydramnios.

3 During the cold months (from October through March) 39 patients with eclampsia were admitted (61.9 per cent). During the warm months (from April through September) 24 patients were admitted (38.1 per cent). April was the month of minimum, and March of maximum incidence of the disease. The monthly incidence is tabulated and discussed, and certain discrepancies with respect to the etiologic influence of the weather are considered.

4 The youngest patient in the series was 21, and the oldest 45 years of age. Between 21 and 30, there were 45 patients (71.4 per cent), between 31 and 40, there were 15 patients (23.8 per cent), and over 40, 3 patients (4.8 per cent).

5 In the ninth month there were 40 patients (63.5 per cent), in the eighth month there were 10 patients (15.9 per cent), in the seventh also 10 patients (15.9 per cent), and in the sixth, 3 patients (4.7 per cent).

6 The series included 3 cases of recurrent eclampsia (4.8 per cent). The general conception of immunity results in a hazardous sense of security. *Predisposition, not immunity, exists.*

7 Previous medical, surgical, and obstetric conditions which were noted in the case histories of the 63 patients are enumerated and discussed. From the preponderance of kidney disorders in the anamneses it appears unlikely that from an etiologic standpoint their presence was coincidental.

8 The treatment given was a modification of Stroganoff's method. Morphine, chloral hydrate, bromides, intravenous injections of hypertonic glucose and magnesium sulfate solutions were freely used.

9 Failure to respond to therapy after

In those cases in which the response to therapy was unfavorable, labor was induced after a period of close observation which varied, in individual cases, from twenty-four hours to three or more days. The improvement often observed in the general condition of some patients only after several days of the above-mentioned therapy has called into question the soundness of routine induction of labor in cases which have been under treatment for only twelve to twenty-four hours. A longer period will commonly effect better sedation and dehydration as well as improvement in the hepatic and vascular functions.

Both in the primipara and multipara induction, when indicated, was accomplished by rupture of the membranes and insertion of a bag in the uterus. Occasionally (3 cases), in the primipara with alarming symptoms and the prospect of a long labor, abdominal delivery was undertaken. One multipara was subjected to cesarean section for cephalopelvic disproportion. The results and other details relative to induction of labor and cesarean section appear below.

This hospital has been in existence only since 1922, a time when the conservative plan of treatment of eclampsia had already been widely adopted. Therefore, we have no statistics bearing on the radical treatment in vogue before this period.

### Induction of Labor

Of the 63 cases in the series, surgical induction of labor was done in 19 (30 per cent). Rupture of the membranes and insertion of a hydrostatic bag in the uterus were done in 17 patients, and in 2 patients a rectal tube was used in place of the bag. Fifteen of the 19 patients delivered spontaneously of whom 12 recovered (80 per cent), and 3 died (20 per cent). The remaining 4 patients were delivered by forceps, and all recovered (100 per cent).

There was a case in which labor was medically induced by means of castor oil, quinine, and enema. Spontaneous delivery and recovery ensued.

TABLE 3 —METHODS OF DELIVERY OF 63 ECLAMPTICS AND RESULTS

Method	No of Cases	No of Deaths
Spontaneous	39 (61.9%)	4 (10.3%)
Forceps	16 (25.4%)	1 (6.6%)
Cesarean section	4 (6.3%)	1 (25%)
Breech extraction	1 (1.6%)	1 (100%)
Undelivered	3 (4.8%)	3 (100%)

### Mortality

In the group of spontaneous deliveries (shown in Table 3) are included the 10 patients, previously referred to, in whom labor was induced. There were in the induced group, as has been stated, 3 fatalities (20 per cent) which is considerably higher than in the group of spontaneous deliveries in which induction of labor was not done. The latter group consists of 24 patients of whom 23 recovered and 1 died (4.2 per cent). The difference in mortality rates between the two groups is probably due to the fact that induction of labor was resorted to in the more severe and refractory type of case. Three of the cesarean sections were done in primiparas, of whom 1 died. One was done in a multipara who recovered. Of the 3 patients who died undelivered, 1 was a multipara in the ninth month with a fulminating toxemia which terminated her life twelve hours after admission, another, also a multipara, was subjected to an attempt at bag induction of labor for severe eclampsia which, however, was ineffectual. She died of acute cardiac dilatation three days after admission. The third patient was a primipara who died 3 days after admission. No attempt at induction had been made.

There were 9 deaths in the 63 cases, a mortality rate of 14.3 per cent. In 6 cases, eclampsia was given as the cause, in 2, lobar pneumonia, and in 1, acute cardiac dilatation. Eden in an analysis in Great Britain reported a maternal mortality rate of 22.5 per cent. Teel and Reid, of Boston, found an uncorrected mortality rate of 26.6 per cent which is close to the average of 20 to 25 per cent generally reported.

In the group of 40 patients whose convulsions began antepartum, there were 8 deaths (20 per cent). Of the 12 patients

# THE VALUE OF BLOOD SEDIMENTATION RATE IN INTRACRANIAL TUMORS

WALTER O KLINGMAN, M D , ROBERT W LAIDLAW, M D ,  
and HYMAN SPOTNITZ, M D , New York City

THE blood sedimentation rate, a valuable laboratory aid in clinical medicine, has not been widely investigated or used in clinical neurology. Perhaps the chief reason for this is that the blood sedimentation rate is increased in many general diseases and occasionally gives inconsistent results. We became interested in its possible value in neurologic disorders particularly because of the difficulty in differentiating between various types of brain tumor.

A study, therefore, was undertaken by obtaining the blood sedimentation rates in 679 cases admitted to a general neurologic service. This particular report is limited to the findings we obtained in 125 cases of verified intracranial tumors and in 43 cases of psychoneurosis used for a control group.

Previous attempts to utilize the blood sedimentation rate in the diagnosis of nervous diseases have been made. Biernecki in 1897 became interested in the sedimentation rate but no extensive investigation was made by him. Grün noted that in tumors of the nervous system normal and increased sedimentation rates were found and that no apparent relationship between the malignant character of a lesion and the blood sedimentation rate existed. He did feel, however, that degeneration of tumors caused an increase of the blood sedimentation rate. Others such as Runge, Demetre and Tonuvici made studies on many conditions in the nervous system but came to no helpful conclusions from their findings. Our findings confirm more or less those already made by Abrahamson and Ask-Upmark in regard to intracranial tumors.

The present series of cases of intracranial tumors, proved either by operation or by autopsy, were all cases with clinical signs. Care was taken to eliminate from consideration all cases in which there was elevation of body temperature, anemia, or complications outside of the nervous system. All of the cases were examined by medical consultants. No attempt was made to determine the total plasma, protein, albumin, globulin, fibrinogen, globulin fractions, and euglobulin in these cases. The Westergren method was used and no correction for cell volumes was made.

The accompanying charts record our findings more graphically than one can describe them. As a control group we selected a series of 43 cases where a diagnosis of psychoneurosis was made. The average sedimentation rate for this group was 6.6 mm in one hour, this rate falling within the limits of normal for the Westergren method in which 10 mm is considered to be the upper limit of normal. The cases of intracranial tumor studied numbered 125. Of these there were the following groups:

	Cases
Astrocytoma	26
Meningioma	30
Glioblastoma Multiforme	35
Chronic Subdural Hematoma	11
Metastatic Malignant Tumors	23

Other types of brain tumors were included in our study but the number in each group was insufficient. Particularly only 4 instances of brain abscess were encountered and the sedimentation rate was elevated in only one case and that elevation was very moderate.



an interval of one to three days, depending on individual circumstances, was regarded as an indication for induction of labor. A period of twelve to twenty-four hours was usually considered insufficient to determine indication for induction.

10 Rupture of the membranes and insertion of a bag in the uterus was the method used for induction of labor in most cases.

11 Of the 63 cases, surgical induction of labor was done in 19 (30 per cent). Three of the patients died (15.8 per cent).

12 Of the 63 cases, 39 were delivered spontaneously with mortality rate of 10.3 per cent, 16 by forceps with mortality rate of 6.6 per cent, 1 breech extraction with recovery, and 3 died undelivered. Four patients were delivered by cesarean section of whom 1 died—a mortality rate of 25 per cent.

13 Nine deaths occurred in the 63 cases (14.3 per cent). The mortality rates for ante-, intra-, and postpartum eclampsia were 20, 8.3, and 0 per cent, respectively. For patients under the age of 30, the mortality rate was 13.3 per cent, and for those over 30, it was 16.6 per cent. The mortality rate in primiparas was 16.6 per cent, and in

multiparas, 11.1 per cent. Reasons for the higher mortality rate in the elderly primiparous group are suggested. A mortality table is presented.

14 The infant mortality rate was 33.3 per cent.

Grateful acknowledgement is here made to Dr. Leo S. Schwartz, chief of staff, for his valuable cooperation in the composition of this report, and to all staff members whose private case records have been utilized. To Messrs H. Merenstein and H. Levy particular credit is due for laborious assembling from the case records of the essential data which form the basis of this review.

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### THE PHYSICIAN'S LOT CAN BE A HAPPY ONE

(With apologies to W. S. Gilbert's "The Policeman's Lot Is Not A Happy One.")

When the average woman patient isn't ailing—  
 Isn't ailing,  
 She's a most unhappy person, to be sure—  
 To be sure,  
 For she certainly believes her health is failing—  
 Health is failing,  
 And calls upon the doctor for a cure—  
 For a cure  
 Perhaps he finds she's to become a mother—  
 -Come a mother,

Then she begs him to deliver her a son—  
 Her a son,  
 Ah, take one consideration with another—  
 With another,  
 The physician's lot can be a happy one—  
 Happy one!  
 O when obstetric-al duty's to be done—  
 To be done,  
 The physician's lot can be a happy one.  
 L. R. D.

### "TO THINE OWN SELF BE TRUE"

Every physician is his own public relations counsel, and every contact he makes with his patients and friends hinders or advances the position of himself and his colleagues in the hearts and minds of the public.—*Bulletin of the Jackson County Medical Society, Kansas City, Mo.*

### WHOOPS!

Lady Reformer "You notice I place the worm in water, it wriggles! It lives! I then place it in a glass of vile whiskey. Notice, it dies a sudden death. Does this ladies and gentlemen, mean anything to you?"

Man in the Audience "Yes, it means I'll never have worms!"—*The Technique*

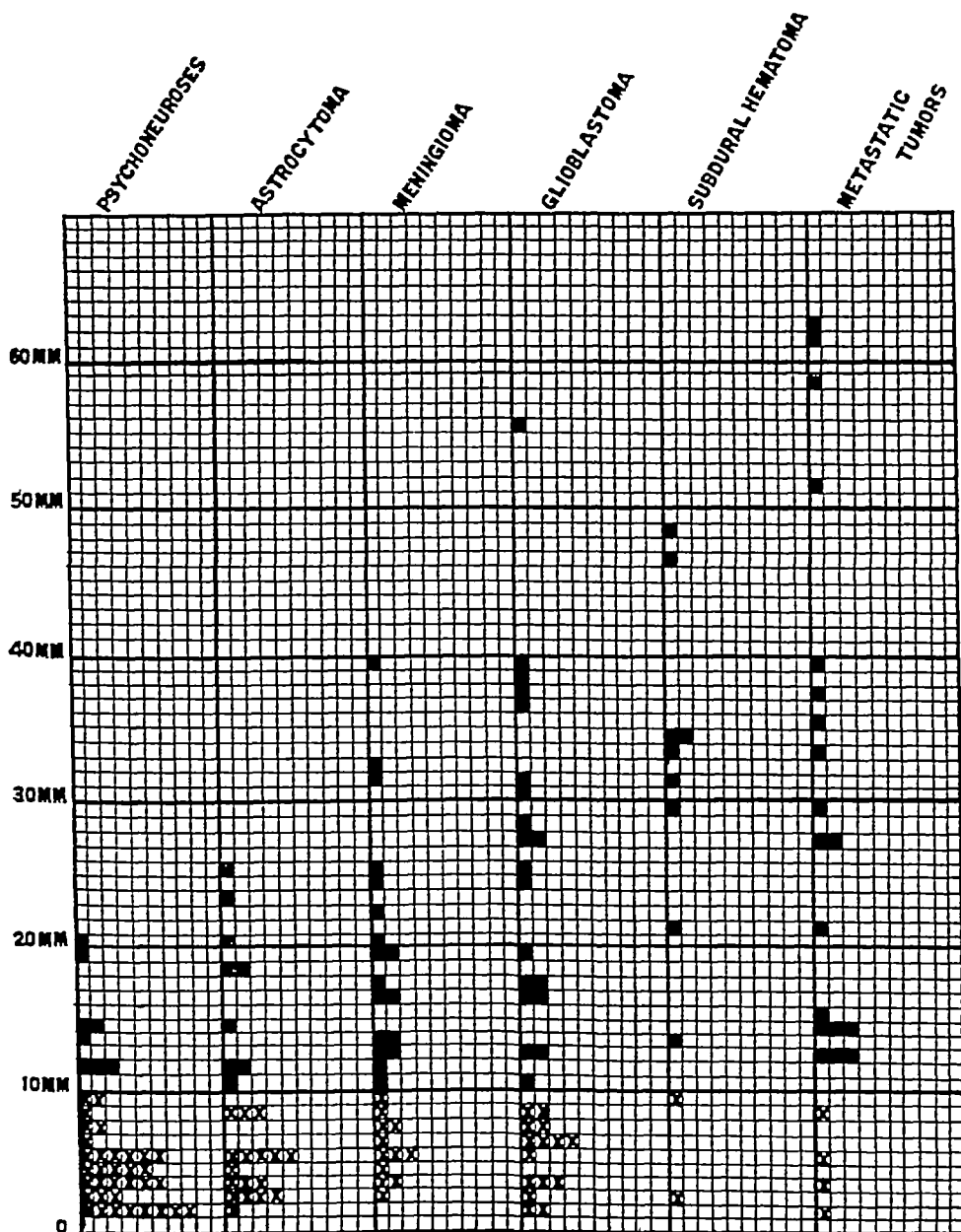


TABLE I

as well as general medical conditions. The sedimentation rate is of aid in differential diagnosis and should be considered just as important as the pulse rate, body temperature, spinal fluid findings, blood count, or other laboratory tests.

#### Summary and Conclusions

The sedimentation rate in a series of 125 cases of verified intracranial tumors was studied and compared with the sedimentation rate in a series of patients clinically considered to be psychoneurotics. It was found that in both types of

The average sedimentation rates for *all* cases in these groups were found to be as follows

In One Hour

	<i>Mm</i>
Astrocytoma	8 7
Meningioma	14 5
Glioblastoma Multiforme	17 8
Chronic Subdural Hematoma	28 2
Metastatic Malignant Tumors	29 5

When one takes only the cases in each group with increased sedimentation rates above 10 mm in one hour, we have the following averages

In One Hour

	<i>Mm</i>
Psychoneurosis	15 1
Astrocytoma	17 6
Meningioma	20 5
Glioblastoma Multiforme	26 8
Chronic Subdural Hematoma	33 1
Metastatic Malignant Tumors	34 6

Table 1 gives a listing of the sedimentation rate made in each case in every group, the crosses indicating rates considered in the normal range of 0 to 10 mm in one hour. The solid squares indicate the cases in each group with a rate above 10 mm.

Table 2 shows a comparison of the average increase in the sedimentation rates above 10 mm in each group.

Table 3 shows the percentage of cases having increased sedimentation rates in each group.

## Discussion

As may be seen from the above report, despite the fact that all the types of tumors occasionally had normal values, the sedimentation rate tends to show both an absolute increase in value and an increase in the frequency of an elevated sedimentation rate, as the type of tumor becomes more malignant. It is evident from the results of the above study that the metastatic malignant tumors have the highest sedimentation rates and the greatest frequency of an abnormal sedimentation rate. This finding is not surprising and is in harmony with present-day conception of the relation of the in-

creased sedimentation rate to absorption of toxins and other products of tumor metabolism. It appears fairly definite that the primary brain tumor, glioblastoma multiforme, produces quite frequently an elevated sedimentation rate and our figures indicate that the sedimentation rates associated with this type of tumor are similar to those found in patients with metastatic growths. Clinically, the true glioblastoma multiforme is the most malignant of the primary brain tumors.

In general these studies appear to indicate the trend that the more malignant the tumor, the more likely the sedimentation rate is to be elevated and the higher the rate is likely to be. There is one important exception to this generalization. It is noteworthy that the subdural hematoma cases revealed a sedimentation rate of a type similar to that observed in the cases of metastatic malignant tumors.

This finding may eventually be of considerable significance and of help in arriving at a diagnosis of intracranial hemorrhage and organizing hemorrhage following head injury. Further studies are being pursued by us at this time in all cases of head injury.

Another interesting finding is that meningioma tended to have higher sedimentation rates than astrocytoma whereas clinically the meningiomas are the most benign of all the intracranial tumors. It is difficult to explain this reversal and if substantiated by further study raises the question whether meningioma produces more toxic products than astrocytoma but because of its relative accessibility and position gives a better prognosis.

From these studies it can be considered that the blood sedimentation test is fundamentally nonspecific and its real function should be to indicate presence of disease. A normal sedimentation rate does not mean that the patient has no disease, but when the sedimentation rate is found to be increased one can be certain that some abnormality exists. This holds true for neurologic conditions.

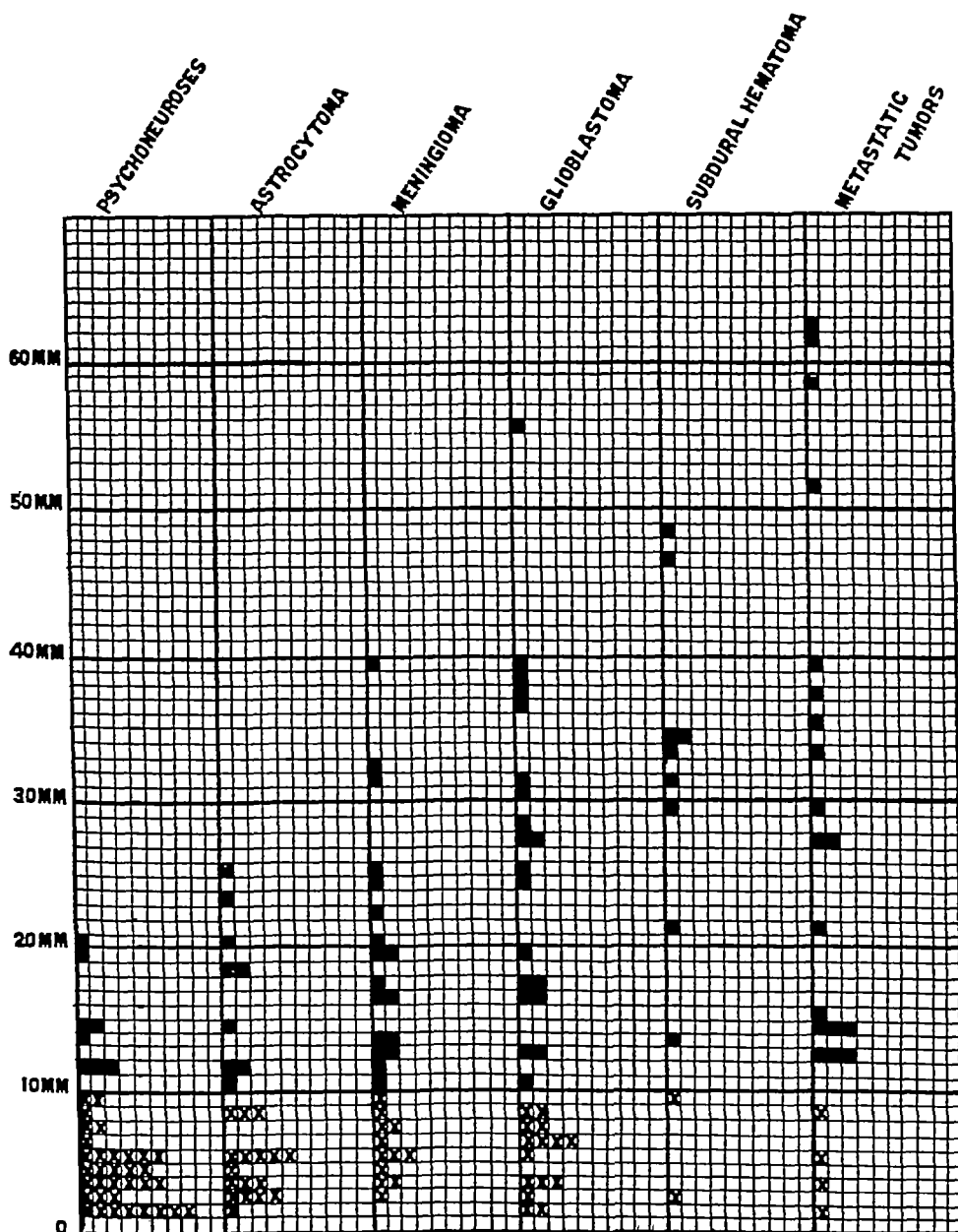


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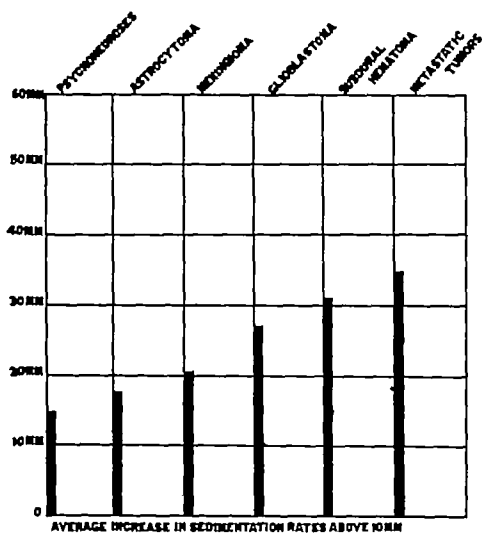


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The relatively high value and the comparative frequency of elevated sedimentation rates in patients with subdural hematoma suggest that an elevated sedimentation rate in patients with head injuries may be of value in the diagnosis of intracranial hemorrhage and production of chronic subdural hematoma.

A normal sedimentation rate in a patient suspected of having an intracranial tumor does not rule out the possibility that such a tumor may be present. The more elevated the sedimentation rate is, the more likely is the tumor to be comparatively malignant.

The intracranial tumors listed in the order of their tendency to produce abnormal sedimentation rates are (1) metastatic malignant tumor, (2) subdural hematoma, (3) glioblastoma multiforme, (4) meningioma, (5) astrocytoma.

No relationship could be found between the elevation of the sedimentation rate

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PSYCHONEUROSIS	18.6%
ASTROCYTOMA	34.5
GLIOBLASTOMA	57.1
MENINGIOMA	60
SUBDURAL HEMATOMA	81.8
METASTATIC TUMORS	82.6

TABLE III

## Discussion

Dr Leon H. Cornwall, *New York City*—Dr Klingman's figures for sedimentation rates in intracranial neoplasms represent, in my opinion, a correct evaluation of the subject and his conclusions are in accord with those of others who have investigated the sedimentation speed in cerebral disorders.

It is somewhat interesting that Singer and Edel, two foreign investigators, reported two years ago on a group of neurologic cases that was numerically almost identical with Dr Klingman's group of intracranial neoplasms. The number of neoplasms in their series was of course much smaller than that covered by Dr Klingman's report.

Singer and Edel reported normal sedimentation rates for hydrocephalus and serous meningitis, slightly increased rates in cerebral tumors, moderately increased rates in subdural hematomata, and greatly increased rates in acute encephalitis and metastatic carcinoma.

The frequent occurrence of elevated sedimentation rates and of relatively high values in glioblastoma multiforme, subdural hematomata, and metastatic neoplasms, is due, in my opinion, to the factors suggested by Dr Klingman, viz products of tissue destruction. Of the intra

cranial tumors there is usually more tissue destruction in glioblastomata and metastatic tumors than in astrocytomata and meningiomata, and it seems to me that this offers a satisfactory explanation. I dare say that a quantitative determination of the lipid content and of the various protein fractions in the cerebrospinal fluid might throw some more light on the biochemical mechanisms concerned.

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It is not easy to explain the absence of similar findings in meningiomata, however, because these neoplasms often attain large size and produce widespread degeneration of neural tissue. The degenerative process probably occurs much more gradually in the case of meningiomata, and this may be the explanation for the lower rates than in the case of subdural hematomata.

Recently I have reviewed the sedimentation rates in 54 cases of neurosyphilis and found them above 10 mm per hour in 32, or 60 per cent. The average values in these 32 cases was 30.5 mm or slightly under Dr. Klingman's figures for subdural hematoma and metastatic neoplasia.

Dr. John S. Lawrence, Rochester, New York—It has been a pleasure to listen to this presentation by Dr. Klingman. I feel that he and his associates are to be commended for presenting data which will incite others to use the sedimentation of the red blood cells in the study of neurologic disorders. Their findings, as pointed out by them, are in conformity with what is known about the sedimentation rate in other conditions. It is well known that malignant lesions with metastases are prone to be associated with rapid sedimentation rates. This is not a specific reaction in any sense of the word but is probably related to tissue degeneration and destruction. This probably explains the fact that these authors have found high values in subdural hematomata. I am skeptical as to how much

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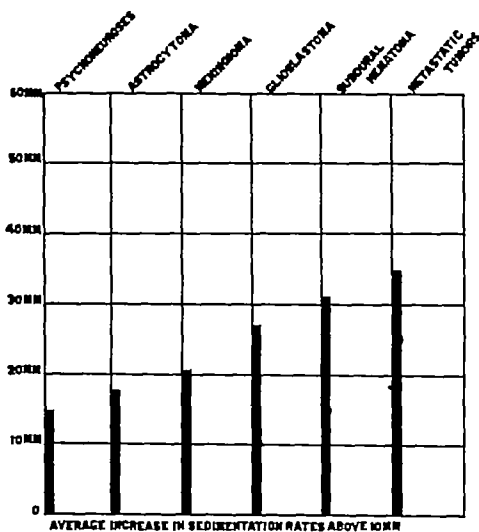


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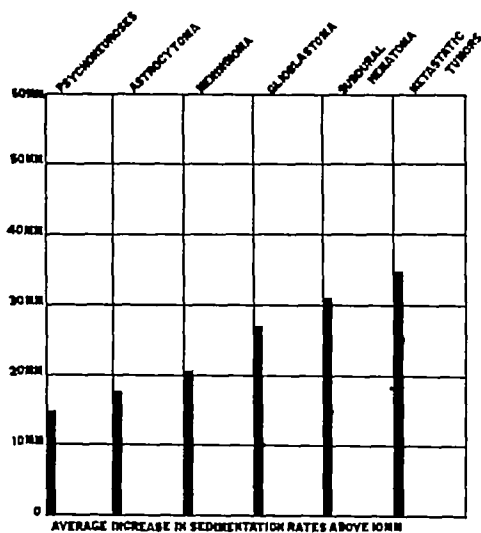


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SUBDURAL HEMATOMA	81.8
METASTATIC TUMORS	82.5

TABLE III

## Discussion

Dr Leon H. Cornwall, *New York City*—Dr Klingman's figures for sedimentation rates in intracranial neoplasms represent, in my opinion, a correct evaluation of the subject and his conclusions are in accord with those of others who have investigated the sedimentation speed in cerebral disorders.

It is somewhat interesting that Singer and Edel, two foreign investigators, reported two years ago on a group of neurologic cases that was numerically almost identical with Dr Klingman's group of intracranial neoplasms. The number of neoplasms in their series was of course much smaller than that covered by Dr Klingman's report.

Singer and Edel reported normal sedimentation rates for hydrocephalus and serous meningitis, slightly increased rates in cerebral tumors, moderately increased rates in subdural hematomata, and greatly increased rates in acute encephalitis and metastatic carcinoma.

The frequent occurrence of elevated sedimentation rates and of relatively high values in glioblastoma multiforme, subdural hematomata, and metastatic neoplasms, is due, in my opinion, to the factors suggested by Dr Klingman, viz., products of tissue destruction. Of the intra

cranial tumors there is usually more tissue destruction in glioblastomata and metastatic tumors than in astrocytomata and meningiomata, and it seems to me that this offers a satisfactory explanation. I dare say that a quantitative determination of the lipoid content and of the various protein fractions in the cerebrospinal fluid might throw some more light on the biochemical mechanisms concerned.

The high values in subdural hematoma do seem puzzling at first thought, but I would be inclined to regard this as due to the destruction of tissue that results from pressure on the subjacent brain tissue. The cases that were available for investigation were of course in the hospital because of clinical symptoms and the symptoms were induced by the pressure effects of the hematoma.

It is not easy to explain the absence of similar findings in meningiomata, however, because these neoplasms often attain large size and produce widespread degeneration of neural tissue. The degenerative process probably occurs much more gradually in the case of meningiomata, and this may be the explanation for the lower rates than in the case of subdural hematoma.

Recently I have reviewed the sedimentation rates in 54 cases of neurosyphilis and found them above 10 mm per hour in 32, or 60 per cent. The average values in these 32 cases was 30.5 mm or slightly under Dr. Klingman's figures for subdural hematoma and metastatic neoplasia.

Dr. John S. Lawrence, Rochester, New York—It has been a pleasure to listen to this presentation by Dr. Klingman. I feel that he and his associates are to be commended for presenting data which will incite others to use the sedimentation of the red blood cells in the study of neurologic disorders. Their findings, as pointed out by them, are in conformity with what is known about the sedimentation rate in other conditions. It is well known that malignant lesions with metastases are prone to be associated with rapid sedimentation rates. This is not a specific reaction in any sense of the word but is probably related to tissue degeneration and destruction. This probably explains the fact that these authors have found high values in subdural hematomas. I am skeptical as to how much

reliance can be placed on this test as an aid in differential diagnosis in neurologic disorders, for it has been found in most other conditions to be much more useful as an aid in studying the course of an established disease than in actually making the diagnosis. However, the data which have been presented, are suggestive and certainly warrant further trial. Inasmuch as metastatic brain tumors are associated usually with more tissue destruction than other brain tumors, they should, *other things being equal*, show a sedimentation rate greater than that found in other brain tumors, but the method can, at best, only be used as an additional laboratory aid in establishing a diagnosis and that is just what the authors contend.

I would like to ask Dr. Klingman if he included nausea and vomiting with dehydration in the statement "complications outside of the nervous system." Many patients with subdural hemorrhage and metastatic brain tumor present these symptoms, which would, I believe, affect the sedimentation rate.

Further, I think it of some importance to know the distribution of the cases between male and female. One would expect somewhat higher values normally for women than for men.

Dr. Klingman stated that cases with "anemia" were excluded. This would make the values reported more reliable, as sedimentation rates obtained by a single reading at the end of an hour are likely to be unreliable in the presence of anemia due to the rapid packing period. This presents a definite limitation for use of this method in brain tumors since it has been our experience that an appreciable number of these patients has anemia. Of course the method can be modified to correct this, but Cutler, Park, and Herr have recently shown that the correction ordinarily used is incorrect and that readings at the end of one hour cannot be used in making an accurate allowance for anemia.

I wish the authors had found it possible to make observations on the fibrinogen and globulin values as I feel one or both of these substances would, most probably, be altered in those conditions associated with rapid sedimentation rates.

This is a provocative paper and one that will do much good by making us think of the sedimentation rate in neurologic disorders.

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Of all allergies the commonest is a sensitivity to situations, both social and psychic—Fellerman

"It's better to have halitosis than no breath at all."—Credited by the Medical World to Confucius, who is not in a position to repudiate it.

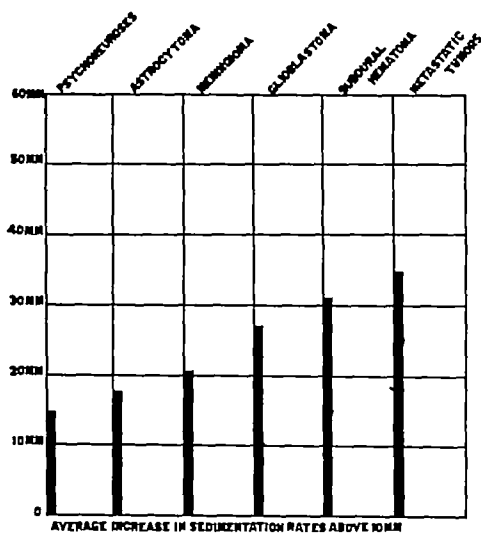


TABLE II

patients the sedimentation rates might be normal or elevated. The frequency of an elevated sedimentation rate was greater in patients with intracranial tumors and the greater frequency of elevated rates was found in those patients with the more malignant tumors. Also, the more malignant tumors tended to give the highest values in the sedimentation rates.

The relatively high value and the comparative frequency of elevated sedimentation rates in patients with subdural hematoma suggest that an elevated sedimentation rate in patients with head injuries may be of value in the diagnosis of intracranial hemorrhage and production of chronic subdural hematoma.

A normal sedimentation rate in a patient suspected of having an intracranial tumor does not rule out the possibility that such a tumor may be present. The more elevated the sedimentation rate is, the more likely is the tumor to be comparatively malignant.

The intracranial tumors listed in the order of their tendency to produce abnormal sedimentation rates are (1) metastatic malignant tumor, (2) subdural hematoma, (3) glioblastoma multiforme, (4) meningioma, (5) astrocytoma.

No relationship could be found between the elevation of the sedimentation rate

and the spinal fluid pressure, spinal fluid protein and cells in patients with intracranial tumor.

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## PERCENTAGE OF CASES HAVING INCREASED SEDIMENTATION RATES

PSYCHONEUROSIS	18.8%
ASTROCYTOMA	34.6
GLIOBLASTOMA	57.1
MENINGIOMA	60
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TABLE I

Apparent Cure Rate and Duration of Disease  
(219 Male Cases)

Days Duration before treatment	Percentage of Apparent Cure	Number of Cases
1-7	65.9	44
8-10	75.0	28
11-14	90.9	22
15-20	81.6	38
21-27	100.0	27
28 and more	96.7	60

this procedure was repeated on from two to more than six occasions before discharging the patient from the hospital

A few patients, apparently cured, as judged by smear and clinical examinations, were classified as failures solely on the basis of gonococci-positive cultures from prostatic secretions

In female patients, following the cessation of clinical evidence, repeated smears and cultures were made from specimens of exudates expressed from the urethra and cervix. In all cases these examinations extended over one or more menstrual cycles. The persistence, in a few patients, of a slight amount of chronic endocervicitis after repeated negative findings by smear and cultural methods was considered to be nongonorrheal. This is in agreement with the conclusion of Bourne<sup>2</sup> and Meigs<sup>3</sup> from their work in chronic endocervicitis

## Results

Following the above routine, apparent cures were recorded in 115 of the group of 123 female patients, a cure rate of 95.1 per cent. The average post-treatment period of observation was seventy-three days and an average of six culture studies was carried out. In the cases complicated by pelvic inflammation there was

marked subjective improvement following response to the therapy with a more or less rapid disappearance, or marked diminution in the size of palpable masses. In several cases, however, pelvic masses persisted. Two cases of mild gonococcal arthritis responded promptly to the therapy. Of the 8 cases which were classed as therapeutic failures, the duration of the infection was under twenty days in 2 instances and of a longer time than this in the remaining 6.

In the 219 cases of male infection a general cure rate of 84.9 per cent was obtained. In the successful cases there were prompt amelioration of symptoms and rapid improvement in those cases exhibiting acute posterior urethritis, prostatitis, epididymitis, vesiculitis, and acute arthritis. There was a less prompt response in instances of chronic articular involvement. In only 1 case was an extension of the infection observed during the therapy. An average of three culture studies was carried out as criteria of cure.

## Optimal Time of Treatment as Regards Duration of Infection

In the material under scrutiny the duration of the obvious infection prior to the employment of sulfanilamide therapy apparently plays an important role in

# FURTHER OBSERVATIONS IN SULFANILAMIDE THERAPY OF GONOCOCCAL INFECTIONS

C J VAN SLYKE, M D, and J F MAHONEY, M D, Staten Island, New York  
(From the Venereal Disease Research Laboratory, U S Marine Hospital, Staten Island)

AS THE use of sulfanilamide therapy in gonococcal infection passes into the third year of clinical evaluation, it seems to have been proved abundantly that the drug is basically capable of producing a high percentage of clinical and bacteriologic cures. As summed up by Pelouze,<sup>1</sup> the cure rate appears to be highest in series of hospitalized patients and to assume a lower level in groups treated under outpatient and office conditions in which adherence to a strict routine is dependent largely upon the degree of cooperation extended by the patient. In the present paper it is desired to present further data upon general cure rates in hospitalized patients as these rates are influenced by the duration of infection at the time treatment is instituted, to review briefly a few of the hypotheses advanced in explaining the therapeutic action of these compounds, and to record some additional observations upon the dosage and upon the occurrence of serious complications.

## Material

The clinical material upon which the bulk of these observations has been made consists of a group of 219 adult males and 123 adult females. In all instances the diagnosis was confirmed by culture methods and not any of the patients had received sulfanilamide treatment prior to the present hospitalization. In addition, the records of 906 cases of male infection, treated and documented by the authors, have been drawn upon for certain supporting data and to give a broader base to the subsequent discussion.

## Routine Treatment

Since all of the patients were adults and free from deterring complications, a

vigorous therapy was employed. The usual dose of the drug approximated 0.1 Gm per kilogram of body weight, the maximum dose being 8 Gm per day. The drug was administered at four-hour intervals throughout the twenty-four hours in order to effect and maintain a high and uniform level of blood concentration. Fluid intake was restricted to 1,000 cc per day as an aid to the maintenance of the concentration level. As a rule the daily dosage was reduced to 4 Gm on the third or fourth day and continued in this reduced amount until the eighth day when, in most instances, the drug was discontinued. In only a few patients was the therapy maintained for as long as twelve days. The variations in the daily amount of drug administered became an individual matter dictated by the rapidity of clinical response, the intensity of toxic manifestations, and the presence of temperature elevation. A temperature elevation above 38.2° C was considered a sufficiently important danger sign to warrant an immediate cessation of therapy. Not any local treatment was carried out.

## Criteria of Apparent Cure

In cases in which there was not any appreciable evidence of clinical response before the sixth day, the therapy was discontinued and the case classed as a therapeutic failure. In male cases a recession of symptoms, cessation of urethral discharge, clearing of the urine, and disappearance of the gonococcus in smear, were followed by the passage of a middle-sized sound and massage of the penile urethra. Material expressed in this way, as well as the secretion produced by prostatic massage, was studied by smear and culture. In cases of apparent cure

*Read by invitation at the Annual Meeting of the Medical Society of the State of New York, Syracuse, April 25, 1939*

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## Optimal Time of Treatment as Regards Duration of Infection

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blood did not appear to increase the incidence rate of acute anemia. As mentioned before, the temperatures of the patients of the series under discussion were determined every four hours and sulfanilamide therapy was interrupted or discontinued whenever a temperature rise to more than  $38.2^{\circ}\text{C}$  ( $100.8^{\circ}\text{F}$ ) occurred. It is not improbable that this precaution has helped to forestall the production of acute anemia in the 1,248 sulfanilamide treated cases of gonorrhea observed by the authors.

Shecket and Price<sup>16</sup> have reported a collection of 10 fatal cases of granulocytopenia in patients who had been given sulfanilamide for a minimum of fifteen days and an average of twenty-seven days. These workers stated that the quantity and prolonged use of the drug were the significant factors. Again it is stated that, in the 1,248 cases of the authors, sulfanilamide was administered for not more than twelve days and usually for seven to nine days. This avoidance of prolonged administration of sulfanilamide and the cessation of treatment immediately upon the appearance of fever or of a toxic dermatitis is considered to be of importance in explaining the absence of granulocytopenia in this series, although obviously these precautions cannot protect against those cases which may arise due to a specific idiosyncrasy.

### Dosage and Concentration

It has again been found, as previously reported,<sup>11</sup> that a high blood concentration of sulfanilamide by itself does not effect a cure of the gonococcal infection. However, if consideration was given to the duration of the disease before starting sulfanilamide treatment, better results were usually obtained most readily in those patients who secured and maintained a high concentration of sulfanilamide in the blood during the first few days of treatment. The restriction of fluid intake to 1,000 cc. per day promotes a higher blood concentration of sulfanilamide, in accordance with the findings of Marshall, Emerson, and Cutting<sup>8</sup> and

Stewart, Rourke, and Allen.<sup>9</sup> The necessity of limiting fluid intake is, however, not in agreement with the report of Alyea, Daniel, and Yates.<sup>10</sup>

It has been the experience of the authors that early—particularly early and inadequate—dosage of sulfanilamide produces a condition resembling a sulfanilamide resistance. A second or third therapeutic attempt with sulfanilamide in an adequate dose results in a high percentage of failures in these cases.

The possibility of a subcurative action of sulfanilamide is not ignored. In the face of our present lack of knowledge concerning the mode of action of sulfanilamide, the necessity of a careful and prolonged period of observation is recognized and urged. Cures should be considered as apparent and not proved. A final discharge should not be granted until re-examinations over a considerable period have failed to reveal any residual gonococcal infection.

### Summary

On the basis of accumulated experience, hospitalization of patients with gonococcal infections during the period of sulfanilamide treatment seems to be advantageous. It permits of an intensive form of therapy and provides the safeguards that are apparently useful in forestalling the production of severe toxic manifestations.

Further, it seems evident that the favorable responses to sulfanilamide therapy increase definitely by delaying the institution of treatment for a time sufficiently long to allow the establishment of an immune mechanism in the greatest number of patients. As previously noted, this satisfactory development of an immune mechanism appears accomplished in practically all patients within a period approximating twenty-one days. It is to be regretted that there is at present not any laboratory method capable of detecting or measuring this immunologic factor. A procedure of this kind would be of value in determining the individual optimal time for initiation of sulfanilamide therapy.

## Conclusions

In a series of 342 male and female cases of proved and hospitalized gonococcal infection, a general cure rate of 87.4 per cent was obtained with sulfanilamide therapy.

When analyzed in accordance with the duration of infection prior to the inauguration of treatment, the cure rate progressively increases with the duration of obvious disease.

Adopting an arbitrary dividing point of twenty-one days, the cure rate increases from 74.5 per cent in the group treated prior to this time interval to 96.1 per cent in cases in which the disease existed for more than this period.

A co-existing immune mechanism seems to be essential to the prompt chemotherapeutic effect of the drug.

Severe blood dyscrasias were not encountered in a total series of 1,248 cases, due possibly to the short but intensive routine of treatment employed and the consideration given to the degree of febrile response of the patient.

The advisability of delaying sulfanilamide therapy until after the obvious disease has been present for twenty days is suggested.

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## Discussion

Dr. Josephine B. Neal, *New York City*—We have at present three chemicals: neo-

prontosil, sulfanilamide, and sulfapyridine, that are of great value in the treatment of various forms of meningitis.

The members of the Meningitis Division of the Bureau of Laboratories of the Department of Health of New York City have used neoprontosil and sulfanilamide for more than two years and sulfapyridine for only a few months. At this time, we can safely make some comparisons between sulfanilamide and neoprontosil. With both these chemicals, we have had very satisfactory results in treating meningitis due to the hemolytic streptococcus, the case fatality being around 20 per cent, although cases treated less than twenty-four hours are included in the series. This form of meningitis had shown a case fatality of more than 95 per cent before we began the use of these chemicals.

Pneumococcal meningitis in which the case fatality had previously been 100 per cent has been treated with less favorable results. We have had 8 recoveries in a group of 52 cases. Sulfapyridine has been used in only 7 cases with 3 recoveries. Obviously with so small a group of cases, it is not possible to draw definite conclusions in regard to the relative merits of sulfanilamide or neoprontosil and sulfapyridine in the treatment of pneumococcal meningitis. At the present time, however, we are treating all of our cases of pneumococcal meningitis with sulfapyridine.

We have also treated 20 or more cases of influenza meningitis with sulfanilamide or neoprontosil, with only 2 recoveries. We have used sulfapyridine in this form of meningitis with apparently better results—3 consecutive cases having recently recovered.

During the past two years, we have seen too few cases of meningococcal meningitis to draw any definite conclusions in regard to the relative merits of neoprontosil or sulfanilamide combined with serum or of serum alone. It is our impression, however, that these chemicals are of value in this form of meningitis and that they may be relied upon to control a septicemia without the use of serum intravenously.

It has seemed to us that neoprontosil is less toxic and quite as effective as sulfanilamide. Barlow has reported that in laboratory animals the oral lethal dose of neoprontosil is nearly seven times as great as that of sulfanilamide. We are inclined to believe that the action of neoprontosil depends on some other factor (probably the azo dye) than the sulfanilamide alone. This belief was expressed by Domagk in regard to the original prontosil, and also by Brown, Bannick, and Herrell of the Mayo Clinic in regard to neoprontosil. Moreover, neoprontosil given orally



is effective when the concentration of sulfanilamide in the blood is only 1 to 3 mg per 100 cc. This compares with a concentration of 10 mg or more per 100 cc, which most workers consider necessary when sulfanilamide is used. Moreover, neoprontosil has a wide range of elasticity in methods of administration. If patients can take and retain medication by mouth, it may be given orally in the form of tablets. This form of administration we prefer, as it is absorbed nearly as quickly as when given subcutaneously and is excreted more slowly. If oral administration is impossible, there is a 5 per cent solution which may be given intramuscularly. This solution may also be given intraspinally, diluted three or four times with sterile saline or distilled water. Sulfanilamide, on the other hand, is soluble only to the extent of about 1 per cent. This solution may be given by hypodermatoclysis, necessarily in much larger amounts, and it may also be given intraspinally. From our clinical observations, from personal reports, and particularly from the experimental work of Marshall, it appears that sulfapyridine is much more toxic than either sulfanilamide or neoprontosil.

Sulfapyridine is best given orally, but its administration is followed by vomiting in a fair percentage of patients. Although it is quite insoluble, it may be given by hypodermatoclysis in a so-called "super-saturated" solution, a liter of normal saline (0.85 per cent) being heated to boiling and a gram of the crystalline material added and stirred with a sterile glass rod. It is necessary to keep the solution well above 40 C while it is being administered. Sulfapyridine may also be given in small retention enemas.

The dose that is suggested for all these chemicals is much the same—15 grains or more every four hours in adults. In severe infections in children more than four or five years of age, the same dose may be tried. In still younger children, 10 grains every four hours may be given. When these somewhat large doses are given to young children no precaution must be spared to guard against the onset of toxic effects. Daily complete blood counts are an absolute necessity and there should be frequent determinations of the concentration in the serum, especially in administering sulfapyridine.

Since neoprontosil is apparently the least toxic of these three chemicals, we plan to continue its use in the treatment of meningitis caused by the streptococcus and the meningococcus. We shall use sulfapyridine in treating meningitis caused by the pneumococcus and the influenza bacillus until a sufficiently large number of cases has been observed, so that we can

compare the relative merits of neoprontosil and sulfapyridine in these infections. It has been our custom to use a specific serum whenever it is available, in addition to the chemical. When meningitis is secondary to a focus of infection, it is always important to eradicate the focus, if possible, by surgery.

Dr A. C. Silverman, *New York City*—The effect of sulfanilamide in scarlet fever is as yet not definitely determined. There appears to be concurrence of opinion that sulfanilamide does not affect the rash and toxemia in the way that serum does. Claims have been put forward, however, that sulfanilamide lessens the incidence of septic complications. When these claims are carefully analyzed, however, considerable doubt remains.

Probably the first report was that by Peters and Harvard in England, who treated 150 cases with sulfanilamide and used a similar number for controls, but gave serum to 56 cases of the latter. They noted that 35 per cent developed one or more complications in the sulfanilamide group as against 56 per cent in the controls. When one examines their table of complications, however, it is seen that albuminuria, rheumatism, endocarditis, and nephritis are grouped together with the more definite septic complications, when it comes to otitis media it is found that there were 11 in their treated group and 10 in the controls, hence the validity of their conclusions may well be questioned.

In our use of sulfanilamide during an outbreak of scarlet fever in 1937, we compared the effect of the drug in moderately severe cases and found 7 instances of suppurative otitis media in 19 cases which served as controls, whereas in 23 similar cases treated with sulfanilamide only 2 suppurative ear cases were noted. Wesselhoef and Smith, in Boston, in a series of 100 cases each had 15 suppurative ear cases in the control group and only 6 in the sulfanilamide group. We agree with them that a larger series is necessary before one can eliminate the factor of chance variation that is so inherent in scarlet fever.

It appeared to us, further, that before valid conclusions could be drawn, it was necessary not only to have a large enough series, but to define criteria of the types of cases as seen on admission and as classified subsequently in the light of the course of the disease. It is also necessary to note the presence or absence of septic invasion at the time that observation begins and to separate these from the septic complications which develop later in the disease and apart from the sequelae which are not considered due

to the invasion of the streptococcus in the tissues. Needless to say, the factors of age and the season must also be taken into consideration, in addition to the length of time from the onset of illness to the beginning of clinical observation.

Applying such criteria to our 1,938 cases, there were 84 that had been admitted to the hospital within three days from the onset. Forty-three received sulfanilamide and 41 were treated without it. The ages were practically identical. The time of the year showed some variation. In the sulfanilamide group, 46 per cent were considered mild cases and in the control group 78 per cent. In the sulfanilamide group there were 22 cases that were considered moderate or severe and in the control group there were 9. Patients with septic complications numbered 20 in the sulfanilamide group and 8 in the control group.

Thus it is seen that the proportion of patients with septic complications corresponds very closely to the proportion of moderate and severe cases in the 2 groups. When attention is focussed on the suppurative ear cases it is seen that in the untreated group they number 3, or 33 per cent, among the 9 patients more than mildly ill and in the sulfanilamide group there were 4 suppurative ear cases out of 23, or 17 per cent. It could be pointed out, too, that among the suppurative ear cases in the first group there was 1 surgical mastoid but none in the sulfanilamide group, and that the suppurative ear cases were increased by only 2 after admission, although 5 catarrhal ear cases were found on admission.

Nevertheless, the small number of cases involved does not warrant definite conclusions.

Undue enthusiasm over individual cases has to be guarded against. It would be very easy, for example, to single out 2 brothers, five and seven respectively, in a family outbreak of 5 cases. Upon admission, both looked like mild cases with but slight rhinitis. Both subsequently developed suppurative otitis media, bilateral in the five-year-old, right-sided in the elder brother. Sulfanilamide was given to the younger brother and he recovered, the other, without sulfanilamide, had the only mastoidectomy in this series. Nonetheless, it is one of the most unsound tendencies in practice to draw conclusions from a single case of an inherently varying morbid process. Clinical impressions have their usefulness, and in clinical studies controls are only such in part, in view of varied and subtle individual differences which cannot be wholly equated, but conclusions can be valid only if based upon clinical experience and judgment within an acceptable statistical framework.

The ease with which sulfanilamide may be given has tended to deny serum to cases that might have benefited from its use. Physicians who tend to be wary of employing serum therapeutically often fail to be concerned over the possible taking of unwarranted risks with sulfanilamide. When one considers that in recent years about 75 per cent of our hospitalized scarlet fever cases have been mild, it seems unwarranted to employ in such cases any therapy that carries more risk relatively than the disease itself.

## THE RADIO BALLYHOO

Tooth pastes and powders, cathartics, antiacids, cosmetics, and patent medicines continue to interrupt our radio musical programs and irritate us as we are listening to the latest trans-radio news. How long will the American public be so gullible, asks the *Journal of the Connecticut State Medical Society*. Just as long as there is money to be made by this kind of propaganda and the radio public will put up with the jarring jargon of these jerry-builders.

Radio advertising was given considerable prominence on the program of the conference of the Association of Food and Drug Officials of the United States recently convened at Hartford.

It was advocated that radio advertising copy be filed and subjected to the close scrutiny of food and drug officials on the same basis as newspaper and magazine advertising. Why not? The detrimental effect of radio in broadcasting misleading information is in direct violation of the

Food, Drug, and Cosmetic Act. As Dr. George R. Cogswill of Yale University said, the general impression given in radio advertising is usually erroneous and if the claims of radio advertisements were included in the written advertisements or on labels, they would be immediately considered a violation of laws.

Our neighbor, Canada, does not allow its radio audience to be duped and bored with all this ballyhoo. Are we in the United States of any less intelligence? It would be a boon to our nerves and a solace to the various parts of our anatomy to which the appeals are directed if the food and drug administrators would adopt a policy similar to that used by the Council on Pharmacy and Chemistry of the American Medical Association whereby data on food and drug products are collected and reported to the public. Surely all claims amenable to scientific tests, chemical or biological or both, should be supported by the appropriate tests.

# Case Reports

## ACUTE PERICARDITIS

### Following a Secondary Infection of the Lymph Node of a Ghon Tubercle

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**A**N ACUTE suppurative pericarditis was found postmortem in the following case. It resulted from the perforation of a pyogenic abscess in a tracheobronchial lymph node. The bacillus tuberculosis was found in the wall of this gland, which was draining a fibrotic, pulmonary Ghon tubercle. Of particular interest, in this patient, was the clinical picture suggestive of coronary occlusion with an electrocardiogram that showed an unusually high elevation of the R-T segment in all 3 leads indicative of the superficial myocarditis accompanying the purulent pericarditis.<sup>1</sup>

S S, a multiparous, white widow, 54 years of age, was admitted to the hospital November 26, 1936, complaining of epigastric distress of three days' duration and an attack of cyanosis, dyspnea, and clammy skin, five hours before admission.

**Previous History**—She had nocturia, weakness, and loss of ten pounds in the year preceding January, 1929, in which month an amputation of the cervix and perineorrhaphy were performed for a lacerated cervix and prolapse of the uterus. In May, 1929, the uterus was suspended anteriorly. Approximately two weeks after each operation, she had pain in the right lower chest, after the second, a friction rub and temperature of 102.8 F developed. She felt well until eighteen months before her last admission to the hospital. She then complained of feeling weak and tired and gradually lost twenty pounds. She was told she had a slightly elevated blood pressure. In October, 1936, the right ankle became very painful and was swollen for three days.

**Present Illness**—On November 19, she became weak and had a temperature of 102 F. The next two days, she tried to attend to her household duties but had to lie down frequently. Her appetite was poor. On November 23, she had pressing epigastric pain and slept poorly. The next morning she was pale, felt weak, and her skin was cold. That afternoon, she vomited once. A steady, persistent, pressing epigastric pain was present until a few hours before admission. She passed no urine the day after the onset of the pain, but the next morning the urine was scant, dark red-brown. At 5:00 P.M. on November 26, she again became pale with a cold clammy skin and her lips became blue, the epigastric pain had disappeared. Breathing increased in rate and was somewhat labored.

**Physical examination** revealed a woman 153 cm tall in collapse. Her temperature was 99 F and her respirations were 48 per minute. The sclerae were icteric. The veins of the neck were moderately distended. The heart was enlarged

to the left of the midclavicular line. The sounds were distant and irregular in rate and rhythm. No precordial friction rub was heard. A few crepitant rales were heard in the right axilla. The abdomen was moderately distended. A suprapubic scar was present. The liver was tender and enlarged to four fingers' breadth below the costal margin. The right great saphenous vein was thickened, firm, and tender in the leg. She had edema of the ankles.

**Course**—She was given circulatory stimulants and the following day her condition improved. She had a marked cough and recurrent, persistent epigastric pain which was made worse after the ingestion of small amounts of food. After an infusion of glucose, the blood pressure rose from 0 to 104/80. She had marked oliguria. During the evening and the following morning she became cold and cyanotic, the respiratory rate increased to 65 per minute and her temperature fell to 97.8 F. She suddenly became comatose and expired on November 28, at 11:00 A.M., about thirty-seven hours after her admission. Preagonal intracardiac adrenalin puncture released five cubic centimeters of a seropurulent fluid from the pericardial cavity.

**Laboratory Data**—(November 26, 1936) Urine—one ounce, albumin faint trace, sugar 0.2 per cent, two or three white blood cells per h.p.f., occasional hyaline and granular casts.

(November 27) Red blood cells 3,510,000, hemoglobin 70 per cent, white blood cells 19,200, polymorphonuclear leukocytes 88 per cent.

(November 27) The only electrocardiographic tracing taken showed auricular fibrillation and high elevation of the R-T segment in all leads, especially lead 2. The descending limb of the R wave was slurred in all leads (see Fig 1).

(November 28) Blood sugar 498 mg per 100 cc, urea nitrogen 71.8 mg per 100 cc, carbon dioxide 38 vol per cent, Kline test negative.

**Necropsy** (No 2791)—The body was well developed and weighed approximately 65 Kg. There was slight pitting edema over both lower extremities and the lumbosacral region. The right and left pleural cavities contained 700 cc. and 200 cc of thin, cloudy, straw colored fluid, respectively. There were adhesions about the right lung anteriorly. The pericardial cavity contained 250 cc of thick, yellow-green fluid, on smear, gram positive diplococci and streptococci were present and on culture there were numerous colonies of streptococcus hemolyticus.

**Pericardium and Heart**—The pericardial surfaces and the epicardium were covered by thick, shaggy material made up of yellow, green, and gray strands which formed a network over the whole surface and the base of the great vessels. The heart portion of pericardium, and several

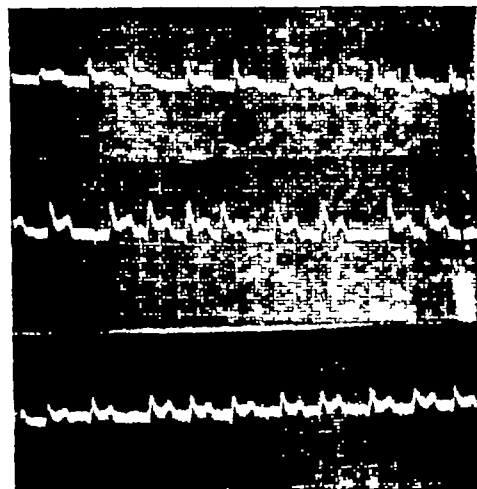


FIG 1 Electrocardiogram

adjacent tracheobronchial lymph nodes weighed 500 Gm (see Fig 2). The valve leaflets were slightly thickened. The coronary ostia and vessels were normal and patent. On gross appearance the cut surface of the myocardium was normal.

**Lungs**—Near the apex of the upper lobe of the right lung, there was a circumscribed firm gray nodule, 1.3 by 0.8 cm (Ghon tubercle). The mucosal lining of the trachea was dark red and granular.

**Tracheobronchial Lymph Nodes**—The tracheobronchial lymph nodes were soft, gray-black, and measured up to 4 by 2 by 1.3 cm. The largest one was hard and situated in the angle between the trachea and right bronchus. It consisted of a partly calcified shell up to 0.4 cm in thickness surrounding a cavity containing creamy yellow-green material. Between the left side of the node and the ascending aorta there was a cavity 2 by 1 cm, filled with yellow-green purulent material, the lining was rough. It joined the cavity of the calcified node by a narrow tract. Through a small opening on its ventral aspect it communicated with the pericardial sac.

**Spleen**—The spleen weighed 260 Gm and was firm.

#### Microscopic Notes

**Pericardium and Heart**—The connective tissue of the parietal pericardium was loose and infiltrated with numerous polymorphonuclear leukocytes, small round cells, and large mononuclear cells. The inner surface was covered with a thick layer of pink staining strands enclosing polymorphonuclear leukocytes and some extravasated blood. Occasional clumps of bacteria were noted among the polymorphonuclear leukocytes. The epicardial surface was covered by a fibro-purulent exudate. Except where the epicardial fat was thick, the fibrino-purulent exudate extended into the surface of the myocardium of all the chambers of the heart. At numerous points, capillaries and strands of fibroblasts extended into the epicardium from the overlying layer of fibrin. The deeper layers of myocardial fibers

were of good size. The intermuscular connective tissue was slightly increased. In scattered areas, isolated myocardial fibers lay embedded in broad strands of connective tissue.

**Lungs**—The interalveolar septa were broad and wavy, the capillaries were distended with blood. In some areas the septa were close together. The epithelium of the bronchioles was desquamated and the walls in places were infiltrated with polymorphonuclear leukocytes and small round cells. There were deposits of coarse black particles about the larger blood vessels.

**Tracheobronchial Lymph Nodes**—In a preparation from the upper portion of the node situated in the angle between the right bronchus and trachea there was no remnant of lymphatic structure. The cavity contained amorphous pink staining material, polymorphonuclear leukocytes and cellular debris. The inner portion of the wall was broad and consisted of loose and more dense hyalinizing fibrous connective tissue with small round cells, large mononuclear cells, areas of calcification, and spicules of bone. Beyond this layer there was a zone of loose fibrous connective and adipose tissue also containing accumulations of small round cells and large mononuclear cells. Staining by the Ziehl-Neelsen method revealed several acid-fast bacilli.

**Spleen**—The spleen showed evidence of passive congestion.

Incidental findings were melanosis of the esophagus and lipomata of the sigmoid colon.

**Anatomical Diagnosis**—Primary tuberculous nodule in lung (right) (Ghon), tuberculous lymphonodulitis,\* mediastinal with suppuration, abscess formation and perforation into the pericardial sac, pericarditis, acute fibrino-purulent\*\*, tracheobronchitis, acute, passive congestion of viscera, acute, bilateral pleural effusion, edema of lower extremities, splenomegaly.

Secondary scar of uterine suspension and cervical amputation, fibrinous pleural adhesions (bilateral), latent phlebitis right saphenous vein.

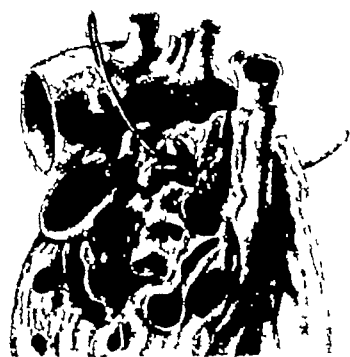
#### Comment

In this woman of 54, a state of lowered resistance was followed by the occurrence of a nine-day hemolytic streptococcus infection which was superimposed upon tuberculosis of a tracheobronchial lymph node draining a Ghon tubercle of the lung. An abscess of this hilar gland perforated into the pericardial sac. A slight rise in temperature was present at the onset. Epigastric pain, vomiting, dyspnea, tachypnea, pallor, weakness, cyanosis, clammy skin, and zero blood pressure were the outstanding symptoms. The pain disappeared after the perforation only to recur with the appearance of a suppurative pericarditis. Marked congestive failure also occurred.

The clinical picture was that of coronary occlusion or of a visceral perforation. However, the electrocardiogram showed markedly positive deflections of the R-T segment in all three leads especially prominent in lead 2. The descending

\* Bacillus tuberculosis on smear

\*\* Streptococcus hemolyticus on culture



SUPPURATIVE MEDIASTINAL  
LYMPHODULITIS AND PERICARDITIS

FIG 2 Needle has been passed through gland abscess into the pericardial cavity through the perforation

limb of the R wave was slurred. No Q wave was seen. Auricular fibrillation was present. A purulent pericarditis amounting to 250 cc and subepicardial myocarditis were found post-mortem. The coronary vessels were normal.

In coronary occlusion the distinguishing features of the electrocardiogram are the elevations of the R-T segments in two leads only. A reciprocal depression of the R-T sector occurs in lead I as compared to lead III or vice versa. A Q wave may be present.<sup>2</sup> A similar electrocardiographic pattern to the one observed in this case might be found if both coronary arteries were involved,<sup>3</sup> with diffuse myocardial damage in infectious disease, and following the use of drugs which affect the entire coronary circulation.<sup>4</sup>

### Summary

A woman of 54 died as the result of a purulent pericarditis with superficial myocarditis and symptoms suggesting coronary thrombosis. The pericarditis was subsequent to the perforation of a secondary abscess in a tuberculous mediastinal lymph node. The electrocardiogram showed a positive deflection of the R-T segment in the three limb leads and slurring of the descending portion of the R waves.

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## GAUCHER'S DISEASE

## Associated with Multiple Telangiectases in an Elderly Woman

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ALTHOUGH Gaucher's disease is not rare, the number of cases actually reported in the literature is not great. Hoffman and Maller<sup>1</sup> were able to collect but 89 cases up to 1929. The following case merits publication not only for this reason but because of several unique features.

## Case Report

S C, Jewess, 68 years of age, was admitted to the Lenox Hill Hospital April 4, 1936, complaining of painful black and blue spots on both legs. Her present illness dated back to eight years ago, at which time, following injury to one of her lower extremities, she developed ecchymotic spots which finally disappeared after prolonged bed rest. She was told at that time that she had a large spleen but states that she had been aware of a large mass in her abdomen for twelve years previously. The ecchymotic spots have returned intermittently ever since. The last attack occurred six months ago and has persisted in spite of bed rest and medication. The areas have increased in size and painfulness. Her appetite during her present illness has been very poor and her diet has consisted almost entirely of milk and crackers. Her bowel movements have been infrequent and small in amount.

The patient had always been in good health except for the purpuric manifestations noted above and a severe attack of bronchitis ten years ago. She had had occasional epistaxes which she attributed to picking her nose. Her skin has always been a deep brownish hue. Her menstrual history was normal. The menopause occurred at forty-eight years of age.

There was no history of familial diseases. Her mother died at ninety-five and her father at 108. Two brothers are alive and well. One brother died of typhoid, one of tuberculosis, and a third of a stroke. One sister died of "hip disease."

Physical examination revealed a short, poorly developed and nourished, elderly, white female, appearing chronically ill. The skin showed a diffuse brownish pigmentation, which was marked even in unexposed areas. There were numerous dark brown freckles, especially over the face and arms. Many small telangiectases were present especially on her upper extremities and abdomen. There was a rather marked loss of subcutaneous tissue.

The pupils were equal, regular, and reacted to light and accommodation. There was no exophthalmos, lagophthalmos, nystagmus, or weakness of the extrinsic muscles. Pingueculae were present in both sclerae. The conjunctivae were clear but somewhat pale. No telangiectases or cause for epistaxis were seen in the nose. On the buccal mucous membrane and lower lip were a few small areas of brownish pigmentation.

The tongue was rather smooth with slight atrophy of the papillae. Numerous telangiectases were present on the dorsal and inferior surfaces of the tongue (Fig 1), none of which were larger than 3 mm in diameter. They were more marked on the left half of the tongue. One was also present on the left buccal mucosa. The gums were atrophied. The pharynx was negative.

The thyroid was not palpable. There was no glandular enlargement. The veins were distended but did not fill from below.

The chest was of normal configuration. The breasts were atrophic and tender but no masses were felt. The lungs were hyperresonant throughout. Breath sounds were vesicular in character with a prolonged expiratory murmur. No adventitious sounds were heard. The apex beat of the heart was visible in the fifth intercostal space, 7½ cm from the midsternal line. The heart sounds were of good quality and regular. A soft systolic murmur was audible at the apex. The radial arteries were not thickened. The pulse rate was 82. The blood pressures were 120 systolic over 70 diastolic.

The abdomen was somewhat distended. The liver was barely palpable and not tender. The spleen was greatly enlarged and extended down to the left iliac crest and almost to the midline.

Both legs showed extensive ecchymoses over the anterior surfaces, most marked in their proximal halves. A few smaller ones were visible on the anterior aspect of the left thigh. These areas were extremely tender.

The reflexes were physiologic.

The anus showed a deep brown pigmentation. There were no telangiectases visible in either anus or rectum.

**Laboratory Data**—Blood count Hb (Sahl)—70 per cent, rbc, 3,300,000, wbc, 1,400, polymorphonuclears, 81 per cent, lymphocytes, 14 per cent, monocytes, 3 per cent, basophiles, 2 per cent, color index, 1.06, platelets, 100,000.

The bleeding time was 7 minutes, the clotting time was 5 minutes, and the prothrombin time was normal. The tourniquet test (Rumpel-Leede) was positive. The plasma fibrin was 385 mg per cent.

A fragility test of the red blood cells showed slightly increased resistance to hemolysis.

Blood chemistry: urea nitrogen, 8.6 mg per cent, creatinine, 0.05 mg per cent, uric acid, 1.6 mg per cent, sugar, 85 mg per cent, serum calcium, 8.6 mg per cent, serum phosphorus, 2.8 mg per cent, cholesterol, 139 mg per cent, plasma sodium, 270 mg per cent (117 me.) and 320 mg per cent (131 me.), CO<sub>2</sub>, 40.4 vol per cent.

The blood Wassermann was negative.

The icteric index of the serum was 10.

Urinalyses revealed specific gravities ranging from 1.009 to 1.025, 1 to 2 plus albumin, a moderate number of scattered and clumped pus cells.

From the Medical Service of Dr Otto M. Schwerdt-leger, Lenox Hill Hospital.

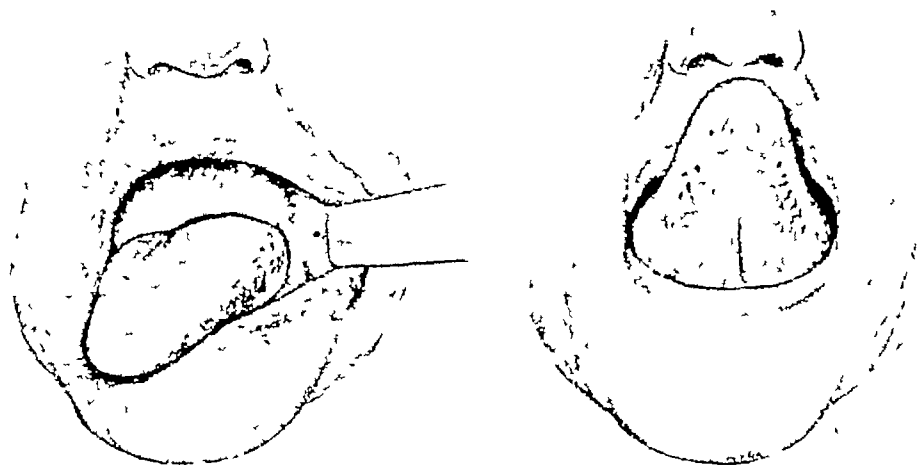


FIG 1 Drawing showing telangiectases of the tongue and buccal mucous membrane.

A gastric analysis showed a free acid of 61 equivalents and a total acid of 76 equivalents

Examination of the stool was negative for blood on several occasions

A galactose tolerance test for liver function was normal, 0.04 Gm being excreted in five hours

Roentgenograms of the lower extremities showed a rather marked degree of cortical atrophy of both tibiae, particularly in the upper and lower fourths. The lower femora showed similar changes. The walls of the blood vessels were heavily calcified. A roentgenogram of the chest revealed the cardiac and aortic shadows to be slightly widened in all diameters and calcific deposits in the mediastinal nodes of the left hilum. A flat plate of the abdomen was negative except for extensive, mottled, calcific deposits on the left side just above the crest of the ilium.

A biopsy of the skin of the forearm was reported as follows: "In the basal layer of the surface epithelium, the cells contain a brownish granular material. The pigment is within the cells and none is present in the surrounding tissue. The pigment has the following negative characteristics: it does not give the Prussian blue reaction, it is not a lipoid (hemofuscin), it does not give the reaction for oxidizing granules (dopa reaction). It is blackened by silver nitrate (melanin and its derivatives)."

A splenic biopsy was performed with the Hoffman punch. The pathologist's report follows: "Microscopic examination (Fig 2) shows splenic tissue, including capsule, which is much thickened by fibrosis. The splenic pulp is reduced in amount and scattered through it are numerous small and larger masses of large, round, or polyhedral cells with small centrally placed nuclei and abundant acidophilic cytoplasm which is either coarsely granulated or vacuolated. These cells correspond to the characteristic cell of Gaucher's disease."

Blood counts taken before and after the subcutaneous injection of 5 minims of adrenalin showed the following

	W B C	P	L	M	E	B
Before Injection	4,200	80	16	4	0	0
15 min after	12,050	60	36	4	0	0
30 min after	9,800	68	28	4	1	1
45 min after	7,000	78	18	3	1	0

*Course*—Because of her markedly restricted diet, there arose the possibility that the hemorrhagic diathesis was related to deficiency of vitamin C. She was placed on a high vitamin C diet and a course of cevitamic acid intravenously was instituted, with, however, no effect on the tourniquet test or the ecchymoses.

The first determination of the blood sodium was low and the report on the skin biopsy showed the pigment to be a melanin or a melanin derivative. Although Addison's disease could not adequately explain the clinical picture, it was decided to test this possibility by placing her on a low sodium diet. No effects were noted.

The remaining therapy consisted of a high vitamin diet, liver, and iron. The ecchymoses were gradually absorbed but some stiffness of the left knee resulted, requiring orthopedic care.

*Comment*—As autopsies on the newborn have demonstrated, Gaucher's disease is characterized from the very onset by a diffuse involvement of the reticulo-endothelial system. According to Pick,<sup>2</sup> there are but two factors that alter the clinical picture of the disease: the participating curve of the organs, which determines the clinical type, and the rate of growth of the disease. How exquisitely chronic the rate of growth can be is exemplified by our patient who was 68 years of age at the time the disease was discovered. That such chronicity is not unique is shown by the case recently reported by Bessie,<sup>3</sup> who was

62 years of age at the time of observation. Horsley, *et al.*,<sup>4</sup> have tabulated in 71 cases the ages at which the disease was first noticed and they list 9 cases, including their own, who were 30 years of age or over. The eldest was 56. Gaucher's disease must, therefore, be considered in the differential diagnosis of splenomegaly regardless of the patient's age.

Another interesting feature of our case was the multiple telangiectases exhibited by the patient. A diagnosis of Rendu-Osler-Weber's disease<sup>5</sup> complicating the Gaucher's disease was entertained at first. The absence of a hereditary familial history and the lack of relationship between the purpura and the telangiectases, however, made this assumption untenable. Although she suffered from epistaxes, no telangiectases were found in the nose and the patient herself attributed them to trauma. Fitz-Hugh<sup>6</sup> has described 4 cases of hereditary hemorrhagic telangiectasia associated with enlargement of the liver and spleen and has collected several others from the literature. They bear no resemblance to our case except for the similarity in blood group (O). In his only autopsied case, the spleen showed a chronic hyperplasia with fibrosis and numerous areas of hemorrhage. The telangiectases shown by our patient are best considered as a senile manifestation. That we were unable to find any mention of them in the literature on Gaucher's disease would then be explicable, as the reported cases comprise on the whole a much younger age group. Her hemorrhagic diathesis is adequately explained by the thrombocytopenia.

There is little reference in the literature to the nature of the skin pigment in Gaucher's disease. It is generally held that the pigmentation of the internal organs is derived from the increased blood destruction constantly present in the disease. In the hematopoietic and lymphatic systems, it consists predominantly of hemosiderin, although iron-free pigment is also occasionally found outside of these structures. With regard to the pigmentation of the skin, Pick<sup>2</sup> merely states that it is an autogenous pigment and is an expression of the hemachromatosis. The chemical tests performed on the patient's skin removed by biopsy indicated that it was melanin or a melanin derivative.

Because of her age, Gaucher's disease was not seriously considered at first in the differential diagnosis. It was soon realized, however, that the galaxy of signs exhibited by the patient, such as pigmentation, pinguiculae, hypochromemia, leukopenia, thrombocytopenia, purpura, enlarged spleen, and changes in the long bones could fit into no other clinical syndrome. We



FIG 2 Photomicrograph ( $\times 300$ ) of tissue obtained by splenic puncture showing Gaucher's cells

decided, therefore, to clinch the diagnosis by means of a splenic puncture. Although not entirely devoid of danger, at least 6 cases have been successfully diagnosed by this procedure.<sup>7</sup> Following the puncture, alarming symptoms of collapse appeared from which, however, she quickly rallied.

#### Summary

1 A case of Gaucher's disease in a Jewish female, aged 68, is reported as the eldest thus far recorded in the literature.

2 The unique association of the disease with multiple telangiectases and their probable senile origin is discussed.

3 The skin pigment was shown to be melanin or a melanin derivative.

4 The diagnosis of Gaucher's disease was confirmed by a splenic puncture.

. . .

The patient was again admitted to Lenox Hill Hospital in the spring of 1939 with a recurrence of purpuric manifestations. The laboratory workup was essentially the same. A moderate anemia was present and the patient was treated supportively with high vitamin diet, cevitic acid, and liver extract intramuscularly. She was discharged much improved after a short stay in the hospital. Her present age is 71 years.

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## CHRONIC GASTRITIS CAUSED BY GASTRIC BEZOAR

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**T**HE object of this report is chiefly a brief discussion of an unusual and unique case which was characterized, especially, by a peculiar set of symptoms pointing toward more than one disease manifestation. The predominating high lights for critical consideration were those of active duodenal ulcer, advanced thyrotoxicosis, and hypoglycemic reaction suggesting pancreatic hyperfunction. The true state of affairs, however, revealed itself inconspicuously and when least expected. The case proved to be one of the so called rare instances of gastric bezoars.

Bezoar is the term applied to the masses found in the stomachs and intestines of animals and men. The ancient Arabians called it *badzehr*, denoting antidote. It was highly valued by virtue of their belief in its power to counteract poison. Bezoars of the human beings are classified into three varieties<sup>1</sup> trichobezoars, composed of hair balls only, trichophytobezoars, composed of hair balls and vegetable fibers, and phytobezoars, composed of vegetable fibers and concretions. The cause of bezoars may also be traced to the swallowing of skins, seeds, fatty acid crystals, shellac, bismuth, and other mineral salts. The muscular contraction of the stomach kneads and molds the swallowed plastic material into casts or balls. It may occur in persons with mental aberration as well as in those of perfectly sound mind.

Symptoms denoting the presence of these foreign bodies bear no characteristic pattern. They depend, essentially, upon the size of the mass, irritability of the gastric mucosa, secondary ulcer formation, or development of chronic gastritis. Epigastric pain relieved by food or alkalies, however, is a fairly constant symptom. This may be associated with flatulence, nausea, vomiting, and irregular bowel action. Gastric analysis has no clinical value in this condition, achlorhydria may alternate with hyperacidity at different times. In the large-sized bezoars, a palpable upper abdominal tumor is readily disclosed, thus greatly adding to the confusion with regard to differential diagnosis.

Roentgen examination, likewise, offers no conclusive diagnosis. At best, this may reveal the presence of a foreign body when of considerable size. When secondary ulcer or extensive gastritis dominates the picture, small bezoars may never be suspected as the causative agents

of the existing disorder. Surgical exploration or spontaneous evacuation is usually the more common mode of obtaining a definite diagnosis.

### Case Report

P. A., aged twenty-two, married, had had no pregnancies and had never complained of any digestive disturbance prior to the onset of the present illness. One year ago she was suddenly seized with severe epigastric pain after eating a dish of shrimps and was relieved by treatment a few hours later. During the year she had several similar episodes, after eating other kinds of food, but she was completely relieved within a short time. She enjoyed total freedom from any gastric symptoms during the intervals. About one month ago her symptoms assumed a changed aspect. Severe localized epigastric pain appeared day after day, two or three hours after each meal. This was associated with nausea and occasional vomiting, continued belching of gas, and unbearable flatulence. She also complained of heat sensation and increased perspiration, weakness, air hunger, fatigue, and annoying frequency of micturition.

Most bizarre of all her symptoms was a constant craving for any and all kinds of food. General comfort and satisfaction was obtained by nothing but continued eating and drinking. However, she had failed to maintain her former weight. She had lost ten pounds within that month. Her nights were undisturbed by any discomfort whatsoever.

Physical examination revealed nothing tangible upon which to base any tentative diagnosis. Offhand, one was justified in suggesting the existence of an active duodenal ulcer. On further reflection, however, this was offset by the absence of characteristic periodicity and seasonal recurrence, response to neutralization by alkalies, nocturnal discomfort, and other specific features commonly associated with peptic ulcer.

Evidence of increased oxidation, as indicated by her loss of weight despite increased consumption of food and increased production of heat and excessive perspiration, was indeed highly suggestive of thyrotoxicosis, hyperinsulinism associated with pancreatic disease, or the syndrome of hypoglycemia with an abnormal response to sugar tolerance test in the presence of ulcer symptoms.<sup>2</sup> This, again, failed to materialize. She had no thyroid enlargement, no exophthalmos or lid-lag, no tachycardia or characteristic blood pressure, no marked nervous irritability or fine tremor of hands, and no abnormal blood sugar curve.

Roentgen examination occasioned further confusion of the issue at hand. No evidence of ulcer was discernible in any position. The stomach and duodenum appeared normal in size, shape, and activity. The mottled circular form of the fundus attracted but little attention at first (Fig. 1). After partial evacuation, however, films taken in the right oblique position



FIG 1 Normal stomach and bulb Slightly mottled circular cardia.

revealed a more generalized mottling throughout the entire proximal half of the stomach, not unlike a generalized polyposis or pseudopolyposis of chronic gastritis (Figs 2 and 3). This deduction obtained corroborative evidence by the two-hour film. The swollen longitudinal folds of mucous membrane, significant of extensive gastritis, abruptly terminated at the margin of the mottled circular cardia. Finally, the well-filled duodenal bulb revealed a small fleck on the lesser curvature, apparently a shallow secondary ulcer crater.

The true significance of this swarming train of symptoms however was disclosed during the performance of a gastric analysis. A number of small black bodies enmeshed within thick mucus, were found in the fasting stomach contents. The consistency of these bodies was that of fragments of old clotted blood, apparently retained between the thickened folds of mucous membrane. Eighty cc. of this material were obtained at that sitting. It consisted, for the most part, of heavy tenacious mucus and a small amount of fluid gastric juice. This had a free acidity of twelve and a total acidity of twenty-eight. A benzidine test, however, was entirely negative.

One of these black bodies was soon examined microscopically. Instead of blood elements they proved to be composed of a mixture of fibers of unequal thickness and reflecting blue pink, and brown colors. The very thin fibers were identified as those of human hair, while those of heavier caliber had no distinctive pattern (Fig 4). They were analogous to the remains of a disintegrated piece of cloth, originally composed of a diversity of colored threads. The presence of a swallowed foreign body and its retention in the stomach formed an indisputable fact. Owing to the rarity of the condition, however, Dr Alfred Plaut, pathologist to Beth Israel Hospital was kindly requested to examine the same slide. His report was nothing but confirmative, specifying additionally that the heavier fibers consisted of a mixture of variously colored cotton and wool threads.



FIG 2 Rapidly emptying stomach Note the appearance of gastritis verrucosa or pseudopolyposis



FIG 3 Two-hour film Note enlarged circular cardia and irregular swollen rugae

The final diagnosis was no further mystery. Obviously, all her symptoms could readily be ascribed to the constant irritation induced by the presence of a gastric trichophytobezoar. Progressive development of chronic gastritis was the primary pathologic factor. The hypochlorhydria, secondary anemia, and the increased bowel action were inevitable sequelae responsible for her deficient digestion and utilization of the

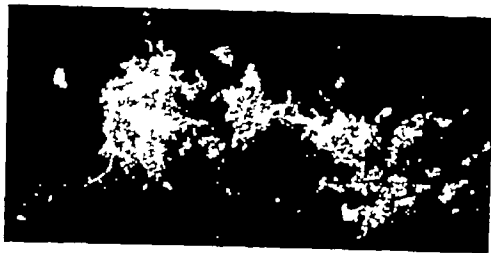


FIG 4 First portion of bezoar obtained through the stomach tube Highly enlarged



FIG 5 Second and larger portion of bezoar Dislodged by stomach tube and appeared by vomiting Slimy mucus surrounding the strands.

excess food by the overburdened and irritable stomach. The secondary duodenal ulcer apparently played a minor role in the production of this complex symptomatology.

The patient's ready cooperation was a direct aid to the final solution of the problem. She had acquired the habit, unconsciously, of biting and swallowing the ends of the different threads during her work of sewing on hundreds of labels on finished white-goods garments. This was continued every day for several years. She modestly conceded, however, that she also enjoyed biting and chewing "other things."

She made a complete recovery and gained strength and weight on a comparatively mild medical regimen and continued gastric lavage.\* A much larger portion of that extraneous material was brought to light for our mutual benefit (Fig 5).

#### Comment

Cases presenting atypical symptoms and signs of digestive disturbance are not of uncommon occurrence.

\* To date, January, 1940 the patient has had no repetition of any symptoms of digestive disturbance. This proves conclusively that her prior symptoms were caused by nothing but the presence of the bezoar.

These, for lack of concrete evidence, are usually designated as nervous indigestion or other applied terms, especially so in the younger adults of modern times. This case, therefore, may rightfully serve as a stimulus to bear in mind the prevalence of like habits with innumerable other workers in the needle trades. The problem of the etiologic factor responsible for certain obscure cases of indigestion may occasionally be solved with more ease.

313 East 17th Street

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## EXTREME FATIGUE OR EXHAUSTION AS A SOLE SYMPTOM OF HEART FAILURE

JULIUS A OSHLAG, M D, New York City

(From *Riker's Island Hospital, Department of Correction, New York City*)

IT HAS been denied that left ventricular failure may first be manifested by fatigue or a sense of exhaustion. MacKenzie<sup>1</sup> states that exhaustion due to an ineffective heart beat rarely occurs and then only in extreme cases of heart failure and advises that if the limiting sensation be exhaustion a careful scrutiny be made for causes other than the heart. Other authors<sup>2,3,4</sup> describing the early symptoms of cardiac insufficiency fail to mention this symptom, stressing instead, the more commonly observed symptoms of failure behind the affected ventricle.

On the other hand, Harlow Brooks<sup>5</sup> states "One of the less frequently recognized symp-

toms, especially by the patient himself, is exhaustion and loss of strength. This state may exist often for a very long time without the appearance of other signs or symptoms likely to arouse the apprehension of the patient." There are other descriptions of the appearance of this symptom<sup>7,8,11</sup> and of its physiologic basis.<sup>9</sup>

It was felt that the unusually long period of time during which fatigue and exhaustion dominated the clinical picture justifies the report of the following case.

A D, an unmarried white female housekeeper, aged 46, was first seen on June 2, 1936. She complained of a feeling of exhaustion and of hav-

ing been extremely tired and sleepy for the past four or five months. After sleeping soundly for eight to ten hours she would arise to find it too great an effort to dress completely. Ten minutes of housework necessitated a rest of at least twenty minutes. She took long naps during the morning and afternoon, and indeed found it difficult to resist sleeping at almost any opportunity. On two occasions she had fallen asleep in the subway and had been carried past her destination. Walking a flight of stairs made her breathe hard but the actual limiting symptom was fatigue and not dyspnea. There were no palpitations, precordial pain, orthopnea, or other symptoms relative to the cardiovascular system. Her habits were good and her past history was negative except for measles in childhood and neuritis at age 31. She had one brother who died at the age of 37 of pneumonia and one sister who died at the age of 35 of childbirth. Both of these were said to have had heart disease, but the type was not known.

At a much later date the patient admitted that some eight months prior to the date on which she was first seen, after experiencing the same symptoms for approximately two months, she had visited a physician in a distant city who had studied her extensively and finally given her digitalis apparently as a diagnostic test. She improved remarkably with this and felt quite well until a short time after she had finished the medicine. Unfortunately she did not recall the name of the physician nor, until reminded, the name of the drug, and thus no data was available from this source.

General physical examination on the day of her first visit was essentially negative except for slight obesity and changes suggestive of very early sclerosis observed in the fundus of the eye. Blood pressure was 162/98. Pulse rate and ventricular rate, 84. Heart sounds were of good quality,  $A_2 > P_2$ . There was a soft low-pitched systolic murmur at the apex, not transmitted and present in both the erect and supine positions. The apex was in the fifth intercostal space, 10.4 cm to the left of the midsternal line and outside the midclavicular line. There was regular sinus rhythm. Fluoroscopy revealed an enlarged left ventricle.

During the next month the symptoms and findings noted above did not change and the following laboratory data was obtained: urine negative, Wassermann negative, blood count showed a very mild secondary anemia, electrocardiograph including lead IV negative, cardiac mensuration TTW 25.1, ML 10.1, MR 4.4 LDH 13.6, basal metabolic rate plus 9, blood urea, NPN, creatinine, and sugar were within normal limits.

On nonspecific treatment including mainly weight reduction and an iron tonic there was some very slight improvement though the fatigue remained a definitely limiting symptom.

On February 16, 1937, after an absence of about five months she returned presenting practically the same symptoms as she had on her first visit. On this date digitalis was commenced and the name of the drug reminded her that she had taken it before. When she returned a week later all of her symptoms had disappeared. This was the first time she had been able to get about her daily routine without the sense of fatigue since she had run out of the digitalis tablets pre-

scribed by the physician who had seen her in the distant city. On February 23, 1937, she was advised to take a grain and a half tablet daily and to return regularly until such time as a maintenance dose might be established.

Despite this instruction she did not again return until July 8, 1937. She stated that she had taken the digitalis regularly up to the first week in April when she ran out of tablets. From that time on the symptoms gradually returned until at the time of this visit she was so weak and tired that she had not the strength to brush her teeth completely without resting at least once during the process. She was again digitalized and within a week was quite well.

On July 27, 1937, she stated that she had been faithfully taking the digitalis but that several days before this date she had given her house an entire cleaning, moved furniture and run up and down stairs frequently, following which she had had an attack of shortness of breath and had coughed. She had no return of the sense of fatigue but the shortness of breath on walking up half a flight of stairs had continued. In addition there was some vertigo on stooping.

Examination on this date revealed in addition to findings noted above a few moist rales at the bases of the lungs and a very mild pretibial edema. The level of digitalis was raised and the maintenance dose slightly increased. When last seen on September 16, 1937, she was still without symptoms.

### Comment

There can be little doubt that the symptoms presented were a result of failure of the heart for they were thrice relieved by digitalis and reappeared when the drug was stopped, whereas other medication had little or no effect. Had the symptoms not been cardiac in origin, digitalis would have had no effect and indeed, with the diminution of output<sup>8</sup> distressing symptoms might have been added. Additional evidence that the fatigue was a result of cardiac insufficiency is found in the frank backward failure presented after the third digitalization and relieved by raising the digitalis level.

The sensations of fatigue and exhaustion indicate the presence of oxygen debt and of accumulation of the byproducts of muscle activity.<sup>9,10</sup> In the normal individual an augmentation in minute output compensates for the production of fatigue bodies up to a certain point and there is no sensation of fatigue. Absence or notable diminution of this reserve power must be considered as a failure of the left ventricle and in the case of fatigue as a "forward failure."

It is difficult to understand in the above case why there should be such marked forward failure without the commonly found respiratory symptoms of failure behind the left ventricle. One may fall back upon the explanation of individual variations in sensitivity to various impulses and postulate an undue central nervous system sensi-

tivity to fatigue bodies That this is not wholly adequate may be noted in the case reported above by the final appearance of full blossomed left ventricular failure, the symptoms of which were recognized and reported by the patient

### Summary

A case is presented in which excessive fatigue or exhaustion appears as the only symptom of cardiac insufficiency for a matter of approximately 23½ months

### References

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### LECTURE-CLINICS

On Friday afternoons from November through April, Lecture-Clinics are being held at the Mary Imogene Bassett Hospital in Cooperstown. They begin at four o'clock and last approximately an hour The dates, subjects, and speakers for the entire series are listed below All physicians and medical students are cordially invited

#### November

- 3 The use of diet and insulin in the treatment of diabetes  
D M KYDD, M D
- 10 The surgical treatment of toxic goitre  
M. A McIVER, M D
- 17 Functional heart disease  
F F HARRISON, M D
- 24 The pathological physiology and treatment of burns  
J E MACMANUS, M D

#### December

- 1 Diabetic acidosis  
D M KYDD, M D
- 8 Birth injuries of the central nervous system  
MARJORIE F MURRAY, M D
- 15 Peptic ulcer  
J E PATTERSON, M D

#### January

- 5 Benign hypertrophy of the prostate  
J H POWERS, M D
- 12 Botulism  
G M MACKENZIE, M D
- 19 Epidemiology and diagnosis of acute poliomyelitis  
F F HARRISON, M D

#### 26 Bacteriemia

G M MACKENZIE, M D

#### February

- 2 Carcinoma of the gastrointestinal tract  
M A McIVER, M D
- 9 Puerperal infections  
G M MACKENZIE, M D
- 16 Laboratory aids in the diagnosis and management of acute infectious disease  
R. M PIKE, Ph D
- 23 The therapeutic use of sulfanilamide and sulfapyridine  
G M MACKENZIE, M D

#### March

- 1 Urologic emergencies  
J H POWERS, M D
- 8 Nephritis  
D M KYDD, M D
- 15 Intestinal obstruction  
M A McIVER, M D
- 22 Toxemias of pregnancy  
F J ATWELL, M D
- 29 Infant feeding  
MARJORIE F MURRAY, M D

#### April

- 5 The etiology and epidemiology of influenza  
R. M PIKE, Ph D
- 12 Geriatrics  
C C McCoy, M D
- 19 The surgical treatment of acute cholecystitis  
M A McIVER, M D
- 26 Disease of the gallbladder  
C C McCoy, M D

### DR LONG TO ADDRESS THE GREATER NEW YORK DIETETIC ASSOCIATION

The annual meeting of the Greater New York Dietetic Association will be held in Hosac Hall, the Academy of Medicine, 2 East 103rd Street, New York City, on February 7 at 8 30 P M

Dr Cyril N H Long, Sterling Professor of Physiological Chemistry at Yale University, has

received special recognition for his literature and lectures on the influence of the endocrine glands on metabolism His subject for the evening will be "Recent Research on the Control of Metabolism by the Endocrine Glands"

Professional friends interested in dietetics are cordially invited to attend the meeting

# Special Article

## TWO UNPUBLISHED LETTERS OF DR. FELIX PASCALIS

HOWARD R. MARRARO, Ph D, Columbia University, New York City

THE New York Historical Society has two unpublished letters by Dr Felix Pascalis on two interesting medical and public health subjects. The first letter dated New York, April 7, 1823, addressed to the Honorable G C Verplanck,<sup>1</sup> deals with the appointment of a resident physician in New York City—a position for which he was applying. The second letter dated New York, March 22, 1825, addressed to the Honorable Clarkson Crolius,<sup>2</sup> deals with the education of apothecaries and the manufacture and sale of drugs.

Felix Pascalis-Ouvrière, the author of these letters, was born about 1750 in France. After receiving his medical degree from the University of Montpellier, he practiced medicine among the French colonists in Santo Domingo. In 1793, when the slave insurrection broke out, he was forced to escape. Together with other refugees, he settled in Philadelphia, where he practiced medicine during the next seventeen years. He was a prolific writer on medical subjects. Until 1801 he signed his name as Pascalis Ouvrière, but in that year he began to call himself Felix Pascalis. His wide experience with yellow fever during his residence in the West Indies qualified him to write with authority on that disease, of which there were several severe outbreaks in Philadelphia during that period. In 1796 he published *Medico-Chymical Dissertations on the Causes of the Epidemic Called Yellow Fever* and on other medical subjects.

A follower of Benjamin Rush, Dr Pascalis at first believed in the domestic origin of the disease, but later, in 1805, after a trip to Cadiz and Gibraltar to study the diseases of warm climates, he changed his views and believed that yellow fever was imported by fomites carried in ships.

About 1810 he left Philadelphia and moved to New York, where he lived until his death in 1833. He was closely associated with Dr Samuel L. Mitchell, becoming one of his co-editors on the staff of the *Medical Repository* from 1813 to 1820. He was greatly interested in botany and was one of the founders and at one time president of the New York branch of the Linnaean Society of Paris. His interest on the subject of the danger of urban burials led him to

publish, in 1823, a book in which he advocated the construction at a distance from every large city of a "Polyandrum" or general cemetery, where all the dead of the city should be interred in hermetically sealed vaults. Since the "Polyandrum" was to be located at a distance from the city, a series of stations, which Pascalis called "luctuaries" were to be built at suitable intervals to afford opportunities for the cortège to rest. In his book he stated that a company was being organized to carry his ideas into effect.

In the following letters the spelling, punctuation, and syntax occurring in the originals have been retained.

Felix Pascalis to G C Verplanck

New York, April the 7th 1823

Sir

I take the liberty of addressing you to solicit the good effects of your kindness and of your official influence in a circumstance particularly interesting to this City, I mean the appointment of the *Resident Physician*.

I transmitted sometime ago my humble petition to His Excellency for the honor of his nomination to that Office. I also availed myself of the politeness of the Hon<sup>ble</sup> Walter Bowne<sup>3</sup> to put in his hands several papers and documents relative to myself. But from another quarter I have been informed that in the selection of a proper person, the Governor<sup>4</sup> would not fail consulting the Gentlemen of the New York delegation. I therefore call on you, Respected Sir, requesting your interest in the occasion, as far as it may not be otherwise engaged.

However Honourable a public professional trust may be, I confess that the duties of this are peculiarly so responsible, while it exposes at all times the incumbent to the conflict of various opinions, that I never felt much encouraged to place myself on the line of Candidates in the health department, Nor would I do it at present but for the following reason and motive.

By the inclosed paper, you will understand that I have advanced certain novel views and principles in explanation of the causes and operation or diagnosis of the yellow fever on the human system.<sup>5</sup> It was late in the season of the elapsed year, when I was struck by the analogy between the symptoms of that disease and those which must take place when the laws of respiration can no longer afford animal heat, nor sufficiently decarbonize the venous blood. I had therefore no opportunity to add to my theory, the *experimentum crucis*, that is, the cure of this pestilential fever by obvious means that might restore animal heat and continue the decarbonizing proc-

ess of the lungs, and for procuring such facts, the official situation of a resident physician, would be the only favourable, there always being sporadic cases of yellow fever in the City and others in the Lazaretto, under his observation \*

If these results can ever be obtained all mysteries and problems in the generation of this disease are unravelled and resolved. A great step is made towards the preservation of mankind, against one of the worst pestilences. As yet, Sir, I could not discover any objection against my hypothesis and I further have obtained important medical authorities for its illustration.

I beg you to accept my best wishes for the preservation of your health and labours, with the assurance of the most respectful sentiments,

Sir,

Of Your H<sup>ble</sup> & Obed<sup>t</sup> Serv<sup>t</sup>  
(Signed) Felix Pascalis, M D

The H<sup>ble</sup> G Verplanck  
In rear

The H<sup>ble</sup> G Verplanck  
in Assembly  
Albany

Felix Pascalis to Clarkson Crolius

New York March the 22d 1825

Honoured Sir

You will perceive by the inclosed petition or memorial of the incorporated Medical Society<sup>7</sup> that it has long been our wish and determination to correct the evils complained of in the preparation and Sale of medicines. By this time we might have been successful in our design, had not many individuals set forth their own views for establishing another monopoly in a professional branch, instead of a plan for procuring instruction and competency to those who are to exercise it. Better to cover their object of a speculating enterprize, they have produced a *Report and a Petition* exhibiting nothing but the evils as aforesaid and the necessity of a remedy and thereby have obtained the Concurrence of many respectable individuals. But the bill before the Hon<sup>ble</sup> the Assembly bespeaks loudly that nothing else could be obtained by it but a privileged stock for the sale of medicine without regulating the instruction and the license of those who are to prepare and sell medicines \*

The task of inspection attributed by the Bill to the Presidents of our medical institutions would be of no avail for meliorating the present condition of our Apothecary Shops, because we are not judges of drugs imported and stored up. The wholesale dealers are the most competent judges of such articles and it is not from them that the abuses of pharmacy have proceeded, but it is from the retailers who are either not rich enough to procure the best drugs and chemicals, or are not sufficiently qualified to prepare medicines.

The want of a well informed and Professional Apothecaries in the City obliges the Gentlemen of the Faculty to provide in their respective offices a small Pharmacy on the nature of which and practical use they have been instructed. But this task is interfering very much with their medical and surgical avocations, and they would be glad to abandon it to regular Apothecaries and thereby to increase their business, if they were equally qualified and instructed as they are themselves. The respective Professions will then be placed on the footing they ought to obtain and which they have already in Philadelphia and among the most civilized nations.

I can assure you, Dear Sir, that the medical County Society will not abandon their views and intention on this important subject. We hope that another year, with the concurrence of the State Medical Society, with that of many respectable Druggists who have a correct understanding of the matter, and with the parental wisdom and authority of the Legislature, a wholesome system and preservative regulations will be obtained for the preparation and Sale of medicines and for the improvement of a Professional branch of the healing art.

Permit me to subjoin and express my sincere wishes for your health and prosperity and of the affectionate and respectful sentiments of your Neighbour and Humble Serv<sup>t</sup>

(Signed) Felix Pascalis, M D

Corresp<sup>t</sup> Secret<sup>t</sup>  
of the Med Soc<sup>y</sup>

In rear

Clarkson Crolius Esq<sup>r</sup>

The Hon<sup>ble</sup> Speaker of the House of Assembly  
Albany

#### Footnotes

1 Gulian Crommelin Verplanck (1780-1870). Author and congressman. Graduated from Columbia in 1801. Admitted to the bar in 1807. Was elected to the New York Assembly in 1820, 1821 and 1822 where his chief interests were educational subjects. In 1824 he was elected to the House of Representatives, and from 1835 to 1841 he was New York State Senator.

2 Clarkson Crolius (1778-1843). Born in New York City. For a long time he was a member of the New York Common Council and for ten years a representative to the State Assembly of which he was elected Speaker in 1825.

3 Walter Bowne ( -1846). Grand Sachem of the Tammany Society in 1820. Represented New York in the State Senate for three successive terms. Appointed mayor by the Common Council (1827-1831).

4 Joseph C Yates Governor of New York from November 6 1822 to November 3 1824.

5 Dr Pascalis is probably referring to his statement of the occurrences during a malignant yellow fever in the City of New York in the summer and autumnal months of 1819 and of the check given to its progress by the measures adopted by the board of health. [1819].

6 In 1822 there were 1236 deaths from yellow fever in New York City.

7 The New York County Medical Society and the New York State Medical Society were established in 1808.

8 Pharmacists began to receive instruction in New York City in 1829 at the College of Pharmacy of the City of New York a department of Columbia University.

#### FUNDAMENTALS

I ask that we may recognize that a physician may be a great doctor without doing original and basic laboratory investigation, that such research belongs to the research investigator and practice

to the practitioner. And most of all, I hope that we will go back to the training of medical students clinically by great clinicians to be great clinicians.—H W Haggard, M D

# Medical News

## The Council Favors Medical Indemnity Insurance Plans

**V**OLUNTARY medical and surgical insurance against physician's fees received further impetus when the Council of the Medical Society of the State of New York acted favorably on a special committee's report on insurance presented by Dr Herbert H Bauckus of Buffalo as chairman, on December 15

The action taken assures wider acceptance by physicians throughout the state of the voluntary insurance principle. It is expected that a number of new organizations will be formed in addition to the three which have already received official authority from the State Department of Social Welfare to operate. These are Medical and Surgical Care of Utica, Western New York Plan of Buffalo, and Medical Expense Fund of New York and Brooklyn.

The purpose of these nonprofit organizations, composed of physicians and laymen, is to provide insurance against doctors' fees up to specified amounts, by the payment of annual charges under plans similar to the 3-cents-a-day hospital insurance system. The plan is approved by the organized medical profession as a substitute for compulsory health insurance under government control.

### Compulsion Avoided

"Compulsory health insurance will be unnecessary," stated Dr Peter Irving, secretary and general manager of the state society, "if these projects are successful. Through the voluntary principle, the same low-income groups are to be cared for as has been proposed should be done by compulsory payroll taxation. The basic difference is that persons are not forced to pay against their will and government control is eliminated."

In the absence of statistical information as to the extent of use of the plan, costs cannot be known in advance, Dr Irving explained. "Actuarial knowledge derived from the operation of hospital insurance plans as well as commercial accident and health insurance companies is inapplicable."

The greatest threat to the principle of voluntary insurance, Dr Irving stated, is that the use of services of physicians might far outrun expectations and create ruinous deficits

### Doctors Solve Problem

This problem has been solved, Dr Irving believes, by what amounts to the doctors themselves issuing their insurance.

"If there is a deficit," said Dr Irving, the loss will be prorated among the participating physicians by means of the 'unit system'. Services rendered will not be paid for in full, but credited to the physician on a unit basis. Financial settlements will be made periodically, only to the extent of sums available from the fund.

"If there is a loss, the physician concerned will share it pro rata, if there is a profit it will be added to the surplus for emergencies such as epidemics, used to reduce the member's annual contributions, or to increase the benefits."

The special committee of the society appointed to assist officials of the new organization in solving operation problems consists of Dr William Hale, of Utica, and Dr Walter T Dannreuther, of New York, in addition to Dr Bauckus

### Quantum Theory of Health and Illness

The New York *Herald Tribune* makes the comment that when the Council of the Medical Society of the State of New York approved the report of its committee on voluntary health insurance it gave tacit approval to what could be accurately described as the quantum theory of health, this latter term including its negative aspect—illness. The committee's report sanctioned a plan under which payments are made during the usual long-continued periods of health to pay for the medical cost of "catastrophic illness." The catastrophic factor for the average individual is usually made up principally of the medical and hospital cost, thanks to the highly advanced state of medical science. These costs are too great to be met out of the miscellaneous item in any weekly or monthly budget, and it is only at rare intervals that there is any necessity for meeting them, but if a portion of the miscellaneous fund is permitted to accumulate it would be adequate to eliminate the catastrophic phase of an illness.

Sudden onset of illness in the midst of health is comparable to the sudden emission of a quantum of energy by an atom and its consequent reduction to a lower energy state. The insurance method of paying the cost of illness could be considered a form of quantum financing. Illness seldom comes to us slowly, or even when it does come by imperceptible stages the crisis usually arrives quickly or, in the language of the physicist, it arrives as a quantum of illness.

Nearly all of our activities are carried on under the quantum theory system. We conserve kindly feeling and generosity throughout the year and when the Christmas season arrives we emit multitudes of quanta of gifts and good will. We then start saving for vacation and, when summer arrives, emit all of our resources in recreation quanta. We work for a week or month and then receive our compensation as a quantum of wages or salary. We preserve a state of sobriety for a long period and then fall off the water wagon into a quantum of indulgence. When we speak in the popular idiom and say "everything comes in bunches" we are expressing the same thought as the scientist who would say the phenomena of life can be described in terms of a quantum theory.

When we recognize the fact that seemingly chaotic experiences of daily existence have an orderly basis that can be described by scientific laws, and when we learn to provide solutions that match our problems, fewer events in our lives will present "catastrophic" aspects. Such scientific planning of our individual lives as is fostered in its sphere by the Medical Society of the State of New York possesses the advantage of retaining for the individual maximum control over his own



affairs. If we sacrifice our individual freedom, concludes the *Herald Tribune*, we face the almost

certain probability of "catastrophic" social, political, and economic ills

## County News

### Albany County

Dr Philip L. Forster was elected president of the Albany County Medical society, succeeding Dr James S. Lyons, on December 6

Other officers elected were vice-president, Dr Thomas O. Gamble, secretary, Dr Homer L. Nelms, treasurer, Dr Frances E. Vosburgh, historian, Dr Charles K. Winne, Jr.

Named censors were Dr Lyons, Dr Arthur J. Wallingford, Dr John B. Horner, Dr Morgan O. Barrett, and Dr John J. Phelan

Delegates to the State Medical society are Dr Stanley E. Alderson, Dr William B. Cornell, and Dr Raymond F. Kircher, with Dr Emerson C. Kelly, Dr Charles A. Perry, and Dr I. J. Murnane as alternates

### Cayuga County

The 134th Annual Dinner Meeting of the Medical Society of the County of Cayuga was held on Thursday, December 14, 1939, in the Osborne Hotel, Auburn, New York

Business session, with reports of officers for 1939, was held at 6 30 p.m., with dinner for members and their wives at 7 00 p.m.

The speaker of the evening was Milledge L. Bonham, professor of history, Hamilton College, Clinton, New York, who gave a very interesting talk on "American-Canadian Relations"

The following members were elected officers for the year 1940

W. A. Tucker, M.D., president, E. J. Kempton, M.D., vice-president, S. J. Karpenski, M.D., secretary, R. J. Thomas, M.D., treasurer, board of censors, Drs L. F. O'Neill, Wilfred Sefton, F. L. Okomewski, L. D. Burlington, and M. L. Seccomb, delegate to the 7th District Branch, J. L. Wiley, M.D., alternate to the 7th District Branch, M. O. Parker, M.D., delegate to the State Convention, H. S. Bull, M.D., alternate to the State Convention, W. B. Wilson, M.D.—*Reported by S. J. Karpenski, M.D., Secy*

### Chenango County

Dr T. Wood Clarke, of Utica, and Dr Joseph R. Wiseman, of Syracuse, were the speakers at the annual meeting of the Chenango County Medical Society at its 135th annual session at the Norwich Club on December 12

The program followed a business session at 1 30. The society joined the Norwich Rotary for luncheon at noon

### Erie County

Following an illness of only a few days, Dr Harry M. Weed, Buffalo eye specialist for thirty-five years, died on December 5 in his home 196 Linwood Ave. Death was attributed to coronary thrombosis. Dr Weed was 65. He was professor of ophthalmology in the U. B. Medical School for fifteen years and last June became professor emeritus. He was consultant at the General and Meyer hospitals and attending ophthalmologist at the Millard Fillmore, Children's and St. Mary's Hospitals and the Moses Taylor Hospital in Lackawanna.

During the World War he served in France with the Buffalo medical unit at Base Hospital 23

### Kings County

The scientific program at the meeting of the Medical Society of the County of Kings, on December 19, included these features

Address "Allergic and Non-Allergic Hypersensitivity as Factors in Industrial Dermatitis," Marion B. Sulzberger, M.D., Manhattan.

Address "Inhalation Allergy: Recent Experiences," Samuel M. Feinberg, M.D., F.A.C.P., Chicago, Ill.

Dr Hyman I. Teperson has been elected president of the East New York Medical Society, one of the oldest organizations of its type in Brooklyn, at the thirtieth annual meeting in the Temple Petach Tikvah, Rochester Ave. and St. John's Place

Dr Teperson is attending radiologist at the Brooklyn Cancer Institute, Beth El Hospital, Brooklyn Women's Hospital, and other institutions. He is an overseas veteran of the World War, a member of the Officers' Reserve, and a colonel in the Medical Reserve Corps

Other officers elected were Dr William Levine and Dr Morris Ant, vice-presidents. Dr Max Dannenberg, treasurer, Dr Mortimer M. Kopp, secretary, and Dr Harry Beller, recording secretary

Dr William Ostrow, 455—75th St., the retiring president of the Ridgboro Medical Society, was honored at a testimonial dinner at the Hotel Granada on December 12. Speakers included Peter Sabatino, lawyer, Boris Fingerhood, superintendent of Israel Zion Hospital, and Prof. William MacTavish, Director of the Department of Chemistry of New York University. Dr Ostrow is connected with the Israel Zion and Post Graduate hospitals

Dr Nathaniel Robinson, who had practiced medicine in Brooklyn for more than fifty years, and had been associated at times with the Cumberland, Carson C. Peck, and Prospect Heights hospitals, died on December 13 at his home, 89 Halsey Street, after an illness of one week

### Monroe County

Dr Albert D. Kaiser was elected president of the Medical Society of the County of Monroe on December 19 as the organization embarked upon its 120th year praised by a state executive leader as second to none in scope and intensity of program

Dr Kaiser, who succeeds Dr Clarence V. Costello, will serve with Dr C. Stewart Nash, former chairman of the legislative committee, as vice-president and Doctors James J. Rooney and William A. Mac Vay, re-elected treasurer and secretary, respectively

The doctors, whose proposed plan for medical indemnity insurance is in the offing, heard Dr. Peter Irving, of New York City, secretary and general manager of the State Medical Society,

declare that champions of socialized medicine are "off on the wrong path" with inferences "that we doctors are blocking the advantages of science to the people."

Dr Joseph J Lawrence, of Albany, executive officer of the state society, who shared the platform with Dr Irving and Dr Terry M Townsend, of New York, president of the state society, said he knew of no medical organization in the state so conscientiously engaged at its work as that of Monroe County.

Dr Townsend's address, "The Gift of Giving," was a reminder to physicians that their service in healing is an opportunity, not to be proffered in such a way as to impress patients with greatness of their gift.

The awaited action by the medical group in approving a medical insurance setup was deferred, probably until spring, with the report of Dr E T Wentworth, who pointed out that the investigating committee which he heads is progressing with a view to presenting a plan thoroughly suited to the particular needs of the community. A meeting between the medical committee and a laymen's committee, headed by Marion B Folsom, treasurer of Eastman Kodak Company, is scheduled for January.

A revised constitution was adopted unanimously.

A more general use of the tuberculin skin test in adults as well as children was recommended at a conference of public health officials and representatives of the Monroe County Medical Society and the Tuberculosis and Health Association at Iola Sanatorium, on December 12.

Explaining that the wider use of the tuberculin skin test will enable physicians to discover infection before disease develops and to discover latent diseases where otherwise not suspected, Dr John J Lloyd, committee chairman and vice-president of the Tuberculosis and Health Association, stated that the help of the health association would be sought in the education of parents to have a tuberculin test themselves as well as to have the test given their children.

Seventy Rochester cancer victims joined the growing list of five-year survivors of the disease in 1939, Dr John M Swan of Rochester revealed to New York State leaders in the fight to control cancer, on December 12.

The executive secretary of the state committee of the American Society for the Control of Cancer, at its 15th annual meeting in Powers Hotel, Rochester, asserted

"That should prove to the patient as well as the doctor that cancer can be cured if caught in its early stages."

Ninety Rochesterians are ten-year survivors of cancer, which is seventeen more than last year, Dr Swan said. In all, there are now 360 persons who have lived five or more years since contracting the disease.

#### Montgomery County

The annual meeting of the Medical Society of the County of Montgomery was held at the Elks Club, Amsterdam, December 13, preceded by a complimentary dinner at 7 o'clock.

Election of officers resulted as follows: president, Dr S L Homrighouse, vice-president, Dr

Julius Schuller, secretary, Dr Roger Conant, treasurer, Dr Leonard M McGugan, censors, Drs William H Seward, William R Rathbun, and R. C. Simpson, delegate to the State Medical Society, Dr H M Hicks, delegate to the Fourth District Branch, Dr E C LaPorte.

The retiring president, Dr L H Finch, reviewed the activities of the society for the past year, which included the postgraduate course given by Wardner D Ayer, M D, of Syracuse, on organic neurology.

At the close of the meeting a motion picture on the "Treatment of Pneumonia" was presented by Dr H M Hicks through the courtesy of the New York State Department of Health on Pneumonia Control.

#### Nassau County

With a total enrollment of 395, the Nassau County Medical Society finds itself with 175 members who have been in the society less than five years. Nearly all of these members are young men just starting the practice of medicine. This rapid growth has created a number of complications, not the least of which is the difficulty the new men find in getting acquainted with each other and with the older members of the society, and the consequent difficulty of discovering for themselves where and how to secure the assistance of the various governmental agencies whose services are of importance both to the doctor and his patient.

Nassau County presents the unique picture of a populous center very inadequately supplied with hospital facilities, and no dispensary system. The county public hospital, the county welfare department, and the county department of health are all committed to the policy of maximum cooperation with the medical profession, and the Medical Society in turn has repeatedly pledged itself to provide adequate medical service, both preventive and curative, to the recipients of public relief and also to the lower income groups who are unable to pay ordinary medical fees and who in other communities would be considered eligible for free care in dispensaries. In order to acquaint these new men with the governmental facilities available for their assistance, and at the same time to secure their assistance in the Medical Society program of cooperation with the governmental agencies, the society has determined to hold a series of meetings designed particularly for the information and guidance of the new members.

The first of these meetings was held on Tuesday evening, December 19, at the Cathedral House in Garden City with an attendance of 125 members. At this meeting an opportunity was given to the members to ask questions following brief presentation of policy, program, and routine by the superintendents of the two county institutions, that for tuberculosis at Farmingdale, and the public general hospital at Hempstead. State and county health department representatives explained the services available through their organizations, and the chairman of the Professional Advisory Committee of the county welfare department discussed the problems of medical relief.

Because of the interest shown, it has been decided to hold another similar meeting in the near future.—*Reported by J Louis Neff, M.D., Executive Secretary*

### New York County

Dr Nathan B Van Etten, of New York, president-elect of the American Medical Association, and three other nationally prominent physicians participated in a symposium on the Wagner National Health Bill at the monthly meeting of the Medical Society of the County of New York at the New York Academy of Medicine, on December 18.

Dr Van Etten and Dr Walter F Donaldson, of Pittsburgh, presented the views of the American Medical Association, which rejected the Wagner Bill in its present form at its annual convention last May in St Louis and recently announced an eight-point platform for guidance in the formulation of a substitute for the Wagner Bill.

Those who spoke in favor of the Wagner Bill were Dr Ernst P Boas, assistant professor of clinical medicine at the College of Physicians and Surgeons, Columbia University, and Dr Robert B Osgood of Boston, professor emeritus of orthopedic surgery at the Harvard Medical School. Drs Boas and Osgood are members of the Committee of Physicians that came out in 1937 in favor of a national health policy that served as the basis for the Wagner Bill.

### Onondaga County

Dr Burton C Doust was elected president at the 133rd annual meeting of the Onondaga County Medical Society on December 5 at the University Club of Syracuse. He succeeds Dr Leon E Sutton. Other officers are Dr Leo E Gibson, vice-president, Dr Dwight V Needham, secretary, and Dr A Carl Hofmann, treasurer.

R Marcus Dick, executive secretary, will continue in that position for another year. The office has been moved from the Starrett-Syracuse building to 308 Medical Arts building.

Dr Orren D Chapman and Dr John C M Brust were named censors for three years.

Dr John J Buettner was elected for a three-year term as delegate to the state society, with Dr Sutton as alternate.

Dr Ellery G Allen, Dr Raymond J Pieri, Dr Carl J Geiger, and Dr Floyd R. Parker were elected for one-year terms as delegates to the Fifth District Branch of the New York State Medical Society.

### Oswego County

Dr H M Wallace of Oswego was elected president of the Oswego County Medical Society at the annual meeting on December 14. Dinner preceded the business session.

Other officers named are as follows: vice-president, Dr Edward F Fox, Fulton, and secretary and treasurer, Dr Francis L Carroll, Oswego. Dr Kent W Jarvis, Oswego, was named delegate to the state society, Dr S D Keller, Fulton, censor for three years.

### Rensselaer County

Dr Charles W Hamm was elected president of the Rensselaer County Medical Society at the annual meeting at the Troy Health Center on December 12.

Other officers chosen include

Dr John O Sibbald, vice-president, Dr Leo S Weinstein, secretary, Dr John F Russell, treasurer, Dr William Trotter and Dr Charles

H Sproat, censors, Dr John D Carroll and Dr Stephen H Curtis, delegates and Dr Clement J Handron and Dr George F Reed, alternates.

The new officers were installed at the society's annual dinner at the Hendrick Hudson on December 13.

Dinner speakers included Dr Sarah M Jordan, head of the gastroenterology department, Lahey Clinic, Boston, Mass., who spoke on "Colitis," and Dr Terry M Townsend, of New York City, president of the Medical Society of the State of New York, who spoke on "State Affairs."

The state president, referring to moves which have been made toward "regimentation" of the profession, saw in a united front the best protection of the practice of medicine against political control.

Dr Shields delivered the address of welcome to the approximately 100 county physicians attending. At the close of the speaking program, Dr Shields turned over the gavel to the newly elected president of the county society, Dr Charles W Hamm, and the new officers for the coming year were inducted.

Music was furnished by a trio directed by Irving Rosenholtz, with Bea Kane, vocalist.

### Richmond County

Dr Herbert A Cochrane, of 2 St. Mark's Place, New Brighton, was elected president of the Richmond County Medical Society at a meeting in the Richmond Health Center, 51 Stuyvesant Place, St George, on December 13. He succeeds Dr Frederick M Schwerd of Princes Bay, president the past two years.

Dr Cochrane had been vice-president the past two years. Dr H Lynn Halbert was elected to Dr Cochrane's former post. Dr George W McCormick was elected secretary, replacing Dr John K. Lucey, secretary the past two years. Dr Curtis J Becker was elected treasurer for a third term.

Following the election the members heard a talk on "Brain Tumors," delivered by Dr Samuel Reback, attending neurologist at Staten Island Hospital and associate neurologist at the New York Neurological Institute, Manhattan.

A medical center for South Shore physicians will be erected in Great Kills by Dr Frederick M Schwerd, retiring president of the Richmond County Medical Society. Plans for the building, which will cost \$17,000, have been filed with the Department of Housing and Buildings at Borough Hall.

Dr Walker Washington, retired physician and a collateral descendant of George Washington died on December 10 at his home, 127 Main Street, Tottenville, S I., after a long illness. He was seventy-nine years old.

Dr Washington was a founder and former president of the Tottenville National Bank and a former president of the Richmond County Medical Society. In the fifty-two years he practiced medicine on Staten Island before retiring two years ago he attended at the births of more than 2,500 infants and, in the last twenty-five years of his practice, was said never to have lost a mother. He also was a specialist in diseases of the lungs and heart.

## Rockland County

Dr Russell E Blaisdell, superintendent of Rockland State Hospital, was elected president of the Medical Society of Rockland County to succeed Dr Pomerantz of Spring Valley, at the annual meeting on December 6, in Nyack. The other officers elected were Dr M. J Sullivan of Haverstraw, vice-president, Dr Miltmore of

Nyack, re-elected treasurer, and Dr William J Ryan of Summit Park, re-elected secretary

Dr John Sengstacken, one of the deans of Rockland county physicians, recently completed his fiftieth year of medical practice in Stony Point and soon will have an equally long record as health officer of the town of that name—says *Health News*

## Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
George E Brewer	78	Harvard	December 24	Manhattan
Edwin R. Crowe	61	Univ & Bell.	December 17	Bronx
Henry T Hotchkiss	76	L I C Hosp	December 18	Brooklyn
Robert Lewis	77	P & S N Y	December 20	Manhattan
Samuel S Markell	54	L I C Hosp	November 8	Brooklyn
Charles A. Mitchell	—	N Y H M C	December 14	Manhattan
L Leopold Moser	47	Berlin	December 20	Jamaica
William R. Pierce	77	Pennsylvania	November 9	Amsterdam
Nathaniel Robinson	78	N Y Hom	December 13	Brooklyn
William I Sirovich	57	P & S N Y	December 17	Manhattan
William E A. Von Der Goltz	77	Basel	December 17	Manhattan
Charles B Warner	85	Bell	November 25	Port Henry
Harry M Weed	65	Buffalo	December 5	Buffalo
George S Williams	82	N Y Univ	December 5	Syracuse

## A BOOK FOR YOUNG FOLKS ON "CATCHING" DISEASES

In order to secure greater public cooperation for the control of "catching" diseases, the Public Health Service has issued a new twenty-five cent booklet entitled, *Communicable Diseases*

"If people understand the nature of disease, if they understand why certain control measures are necessary, they will cooperate," Dr A M Stimson, Medical Director, U S Public Health Service and author of the book, states in his introduction.

"If people understand, they will obey reasonable rules and regulations. They will go to their doctors when symptoms appear and shun the quack and the patent medicine vendor," Dr Stimson concludes

This 124-page booklet, distributed by the Government Printing Office, is intended as a source of dependable information primarily for students in high schools and junior colleges and discusses about forty infectious diseases which are considered "the most important for people

living in America at the present time to know something about."

Included in the booklet are essential facts on such diseases as chicken pox, common cold, diphtheria, food infections and food poisonings, measles, gonorrhea, infantile paralysis, influenza, mumps, pneumonia, septic sore throat, and whooping cough. This compact little volume also contains a glossary explaining the different terms and a section of suggestions for teachers.

In a preface to the booklet, Dr J F Rogers, Consultant in Hygiene, U S Office of Education, declares that "knowledge is our most potent agent in bringing about the prevention of disease and the promotion of health."

Many diseases are communicable, but, fortunately, information concerning those diseases is also communicable, observes Dr Rogers, who points out that, "If we would put into practice all the knowledge furnished in this booklet, the number of the sick and of premature deaths would be greatly reduced."

# Hospital News

## A Hospital Code of Employee Relations

**T**HE right of voluntary hospitals to discharge employees "without intimidation or interference when, in the judgment of the management, such course is in the interest of the welfare of patients and efficiency of the institution," is set forth in a code of employee relations adopted by members of the Greater New York Hospital Association.

"The interest of public safety and public health requires that discipline be observed by every hospital employee," the code declares. "The right of the sick person to uninterrupted, skillful and efficient care precludes any right of employees to obstruct or impede hospital service. Any organized effort to interfere with hospital service must be regarded as an act of hostility to the common good."

The hospital administrators agree that employees should be free to join any lawful organization but that employment should not be made dependent on membership or nonmembership in any group. According to the code, workers are entitled to receive wages "comparable with those which prevail in the community for similar type of work done and commensurate with the financial resources of the hospital."

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John F. McCormack, superintendent of Presbyterian Hospital, is president of the association.

## "Frozen Sleep" at Welfare Island

**D**R S S GOLDWATER, Commissioner of Hospitals, New York City, announces that cryomotherapy, popularly known as the hibernation or frozen sleep method for the treatment of cancer, will be undertaken at City Hospital on Welfare Island. The installation of a special chamber at City Hospital has been made possible by a donation of about \$4,000 from Mr and Mrs Walter C. Baker of 555 Park Avenue, New York. Mr Baker is a trust officer of the Guaranty Trust Co., a member of the Manhattan Eye, Ear, Nose, and Throat Hospital, and a life trustee of Union College.

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The treatment at City Hospital will be under the direction of a staff committee consisting of Dr W. Laurence Whittemore, visiting physician, Dr Paul K. Sauer, visiting surgeon, and Dr James R. Lisa, pathologist. Dr Sauer is associated also with the work at Lenox Hill Hospital.

The views of the City Hospital Staff committee have been summed up in a report as follows:

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"These evidences are clearly discernible in cases studied by competent authorities. A demonstration of slides and biopsy specimens at Temple University presented evidences of improvement in patients cared for under cryomotherapy."

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Overcrowding in institutions for the mentally ill, such as Utica State Hospital, isn't caused by the "dizzy pace" of modern life.

Rather, in the opinion of Dr Willis E. Merriam, new superintendent of the hospital, in increasing population of these institutions is due to the economic situation, plus increased cooperation from social service organizations.

Utica State Hospital, with a nominal capacity

of 1,552, now carries 2,073 patients on its books, with 1,720 actually sheltered there. The other 353 are on parole or in boarding homes.

Within the last few years there has been a tendency by social service organizations to "sell" the idea of institutional care to families which might have been burdened by a member with mental sickness. A greater public confidence has developed in state hospitals, Dr. Merriman pointed out.

Clinics to discover persons needing hospitalization for mental illness are conducted every Friday at Utica Dispensary. In addition, a member of the local hospital's medical staff conducts clinics every two months in Schenectady, Amsterdam, Saratoga, and Johnstown.

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A child should never be sent to the hospital without being told where he is going, Mary L. Poole, Philadelphia, warns in *Hygia*, The Health Magazine.

On the child's adjustment to the hospital partly depends his ability to be benefited by the care he receives, she points out. When the idea of hospitalization is not introduced in a straightforward manner, much psychological harm may be done. The child may have a deep sense of insecurity and a feeling of distrust toward his parents, and on future occasions when hospitalization is necessary he may relive his original terror.

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A new method of detecting diseases of the lungs, notably tuberculosis and silicosis, is being employed at Memorial Hospital in Albany by means of a common photographic utensil, the light meter, and is described in the Albany newspapers.

Proponents of the technique have rechristened the light-measuring device "the pneumometer."

Development of the method is credited to the researchers of the John B. Pierce Foundation in New York, which is undertaking extensive study of the silicosis problem.

The discovery is ranked in importance with the x-ray itself as a means of detecting lung disorders.

The pneumometer method of diagnosis measures the amount of light seeping through x-rays of lungs, mounted on illuminating boxes. Measurements, in units of light, are made at five points: the heart, base of lungs, middle part of lungs, apex of lungs, and windpipe.

Measurements are recorded on a graph, and lines between the points connected. Should the lines form a U-shape, lungs usually are normal. Should a W-shape be the result, silicosis is indicated. Where tuberculosis is present a shape similar to the square root sign is formed. If cancer is present a double V-shape appears.

Value of the method is based on the logic that the eye is more sensitive than the ear, and film even more sensitive than the eye.

### Improvements

**H**OSPITAL needs of the boroughs of Brooklyn and Queens, often described by Mayor La Guardia as outranking more spectacular public

improvements, are estimated at \$40,761,000 by Commissioner S. S. Goldwater in his annual report for 1938.

"New institutions which ought to be erected between now and 1945," he says, "would involve \$14,850,000 in Brooklyn and \$6,650,000 in Queens." The former would provide 1,300 additional beds, and the latter, 500 beds. Dispensary services could account profitably for \$2,002,000 in the older community and \$270,000 in the younger. Miscellaneous expenditures for better facilities are outlined by Dr. Goldwater at \$14,088,500 in Brooklyn and \$2,900,000 in Queens.

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Shampan & Shampan, architects, are preparing plans for the Boro Park General Hospital for rebuilding the hospital buildings, located on the southwest corner of Fifteenth Avenue and Forty-fifth Street, Brooklyn. The main hospital is now a two-story fireproof building, and will be extended two stories in height. The exteriors of the buildings are being redesigned in modern style introducing glass blocks on the exterior and for interior partitions. It is estimated that the work will cost about \$100,000.

The former St. Cecilia Hospital for Women at 484 Humboldt Street, Brooklyn, which was closed after the death of the Rt. Rev. Mons. Edward J. McGolrick has been reopened under the supervision and management of St. Catherine's Hospital, according to announcement by the Rev. Paul J. Faustmann of St. Catherine's Hospital.

The old St. Cecilia Hospital will be known as St. Catherine's Maternity Hospital, Monsignor McGolrick Memorial Building.

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A proposal to establish a community hospital at Woodmere, L. I., to serve the area from Inwood to Hewlett has been broached by the Woodmere Exchange Club. Dr. E. Wallace Small, president of the club, has appointed Dr. Curt B. Hardt as chairman of a community hospital committee to promote the project.

Work has started on the three-story addition to the Mount Vernon Hospital, to cost \$126,600.

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Work on the new \$300,000 wing of the South Nassau Communities hospital, Oceanside, has been begun. The hospital will be doubled in size on completion of the project.

The construction work will be done by John J. Dixon Company, Inc., of Roosevelt, for \$215,000.

Equipment of the new wing will cost \$45,000, furnishings will amount to \$25,000, and other expenditures will total \$15,000. The wing, which when completed will give the hospital a 'Y' shape, will have fifty-eight beds, three operating rooms, two delivery rooms, a nursery, laboratory, and increased facilities for doctors, nurses, executive offices, laundry, and boiler room.

The bulk of the cost of the improvement will be paid by means of a 10-year \$200,000 mortgage.

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Utica State Hospital, with a nominal capacity

the writer set forth his findings. We have spent the interval between editions presenting a little new data and a great mass of speculation.

The seventh edition is certainly radically different in style and substance from those of the past, but it is no less authoritative. The first few pages seem over-philosophical until the reader suddenly realizes that he is intensely interested in the really basic aspects without which no intelligent understanding of the subject can be reached. Comparative anatomy and physiology are stressed in some detail, and lead up to the human anatomic and physiologic considerations on which the pathologic conditions are based.

As the author says it is not really possible to bring "Worth" up to date. It is a milestone, and miles do not grow longer. A new book has actually been written on the framework of the old, but the substance in the new model is as different as was anatomy and particularly the physiology of thirty-five years ago. It is absolutely essential that a consideration of the subject be modern, and those who have not grown with the times will not like this new edition.

The ground work for the book is laid in the first 100 pages, the pathologic aspects viewed in a modern light come next, and the classical development of the subject follows. It is a fine textbook, but the beginner would do better by reading less elaborate works.

The pages on surgery of squint interested the reviewer least, and it seems unfortunate that so fine a work is unaccompanied by references to the literature.

JOHN N EVANS

Oh, Doctor! My Feet! By Dudley J. Morton, M.D. Duodecimo of 116 pages, illustrated New York, D. Appleton-Century Co., 1939. Cloth, \$1.50.

"A man convinced against his will is of the same opinion still, a woman convinced against her will is neither convinced nor is she still."

There is no metatarsal arch.

The supposed beautiful long second toe is a congenital malformation.

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The author truly states that "the monograph cannot in any way be considered a textbook on occupational diseases," and further remarks that "those who may assume that the material in this small volume will provide the easy solution of their difficulties will be doomed to keen disappointment."

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The author is to be commended for his laudable attempt, and while it is just another book in the field of industrial hygiene and workmen's compensation, it may prove useful to those who desire a small concise handbook on these subjects

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appeal to the American intern in 1939 should have at least some index reference to such well-known items as the Wangenstein Drainage, Russell Traction, and the Miller-Abbott Tube.

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The criticism directed against the first edition still holds there is no evidence that the author speaks with authority on the subject. Neither research work nor clinical contributions of the author are known, and most of the illustrations of the book are reproduced from other publications or are due to the courtesy of other physicians Thus, the text is not upheld by personal authority, and is not even supported by adequate references or bibliography Hence, this volume must be classed as a compilation by a diligent, but not always discriminating reader of endocrine literature, it is utterly lacking in individual concepts, and both classification of endocrine syndromes and their interpretation are strictly conventional Almost one half of the book is devoted to the endocrine aspects of "Non-Endocrine" diseases, discussing manifestations noted on the various organs of the body This section includes some valuable points which, however, are submerged in a welter of irrelevant material Additional chapters deal with interpretation of laboratory findings and procedures, in addition to a rather complete enumeration of the commercially available endocrine preparations

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We have waited nearly a score of years for the present revision of Worth During that time we have fed upon, and for the most part assimilated the story of squint that Worth set before us, and we have seen the literature grow by leaps and bounds The reviewer has long felt the need of a monograph which would make accessible the accumulated evidence of these years He has looked forward in the hope of finding new tools

Perhaps the older editions of Worth are best remembered for the simple manner in which

the writer set forth his findings. We have spent the interval between editions presenting a little new data and a great mass of speculation.

The seventh edition is certainly radically different in style and substance from those of the past, but it is no less authoritative. The first few pages seem over-philosophical until the reader suddenly realizes that he is intensely interested in the really basic aspects without which no intelligent understanding of the subject can be reached. Comparative anatomy and physiology are stressed in some detail, and lead up to the human anatomic and physiologic considerations on which the pathologic conditions are based.

As the author says, it is not really possible to bring "Worth" up to date. It is a milestone, and miles do not grow longer. A new book has actually been written on the framework of the old, but the substance in the new model is as different as was anatomy and particularly the physiology of thirty-five years ago. It is absolutely essential that a consideration of the subject be modern, and those who have not grown with the times will not like this new edition.

The ground work for the book is laid in the first 100 pages, the pathologic aspects viewed in a modern light come next, and the classical development of the subject follows. It is a fine textbook, but the beginner would do better by reading less elaborate works.

The pages on surgery of squint interested the reviewer least, and it seems unfortunate that so fine a work is unaccompanied by references to the literature.

JOHN N EVANS

Oh, Doctor! My Feet! By Dudley J. Morton, M.D. Duodecimo of 116 pages, illustrated. New York, D. Appleton-Century Co., 1939. Cloth, \$1.50.

"A man convinced against his will is of the same opinion still, a woman convinced against her will is neither convinced nor is she still."

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### According to Need

Unless federal aid for medical services is to be a form of glorified political patronage, it seems obvious that it should be distributed on the sole basis of need. One of the grave flaws in the Wagner National Health Bill was its adherence to the principle that the states must match federal grants. With this requirement in force, the richest states, which have least need of help, obtain the most money from Washington. Organized medicine holds that a state should make a maximum effort before receiving federal aid, but when the latter is granted, the amount should depend upon need and no other criterion.

In a recent press interview President Roosevelt indicated that he is swinging around to this point of view in connection with possible federal construction of hospitals. He pointed out that the states which can match large federal grants already have the best hospitals, while the poorer states, which urgently need additional health facilities and cannot themselves provide them, are unable to obtain sufficient financial assistance from Washington under a matched program.

Abandoning the grandiose building schemes contemplated in the Wagner and Harrison bills, the program that Mr. Roosevelt is reported to favor envisages small hospitals to be erected in sections where facilities are lacking and where local authorities give assurances that they will properly maintain and operate the institutions built for them by the federal government. The United States Public Health Service and a committee of physicians would pass on the plans for each institution and ascertain local ability and willingness to run it.

The medical profession has repeatedly expressed itself in favor of the development of adequate hospital and laboratory facilities *in communities needing them*. It has long urged *local* administration

treatment of pulmonary conditions, postoperative complications, and many advances on diverse subjects are included in this second edition with elimination of material from the first edition which is no longer useful. An extensive bibliography is included. The book should be very helpful not only to undergraduate students but also to general practitioners who desire to keep abreast of the many advances which have been made in recent years in surgery.

EMIL GOETSCH

**Principles of Hematology** with 100 illustrative cases and 155 illustrations including 168 original photomicrographs and 95 original charts and drawings. By Russell L. Haden, M.D. Octavo of 348 pages, illustrated. Philadelphia, Lea & Febiger, 1939. Cloth, \$4.50.

This valuable little book is an important addition to American literature on the subject. It has, within a relatively small space, all of the information on the anemias and other blood diseases that anyone except specializing hematologists is likely to require. The book is complete, authoritative, and up to date, and the style is interesting. A useful feature is the inclusion of 95 charts, which tell at a glance what it would take pages of printed matter to describe. Still another excellent feature from the point of view of teaching is that the clinical features of the hematologic diseases are covered in a section occupying one third of the volume by means of 100 illustrative case histories. Technical methods, often avoided in books of this type, are carefully described. Complex and confusing classifications, so popular at present among hematologists, are omitted and only those generally accepted and easily understood are included. There are many good microphotographs, but the inclusion of one or two colored plates would have enhanced the value of the book.

MILTON PLOTZ

**Biographies of Child Development. The Mental Growth Careers of Eighty-four Infants and Children. A Ten-Year Study from the Clinic of Child Development at Yale University.** Part One by Arnold Gesell, M.D., Part Two by Catherine S. Amatruda, M.D., Burton M. Castner, Ph.D., and Helen Thompson, Ph.D. Octavo of 328 pages, illustrated. New York, Paul B. Hoeber, Inc., 1939. Cloth, \$3.75.

This is another publication from the Yale Clinic of Child Development under the direction of Arnold Gesell. It presents concrete studies of individual differences in the patterning of early behavior development through the medium of clinical case records. The growth graphs in the first portion of the book are continuations of studies made ten years before with a reappraisal of the results. From this reappraisal the authors conclude that there is a "high degree of latent predictability in the early sector of the life cycle."

Part two of the book takes up individual studies of behavior growth. Cases of superior mental endowment, language problems, reading disabilities, twinship, and prematurity are studied. The authors feel that the individual differences in growth considered in these chapters are due to

differences in "(a) original capacity to grow, (b) general rate or tempo of growth, (c) patterns of developmental organization." They conclude that rather than pay too much attention to training and instruction, more would be obtained, particularly in the first five years of a child's life, through discovering and respecting his individuality.

This book is a worthy addition to the studies undertaken previously, and should be of particular interest to those interested in the growth and development of childhood.

STANLEY S. LAMM

**Recent Advances in Chemotherapy.** By G. M. Findlay, M.D. Second edition. Octavo of 523 pages. Philadelphia, P. Blakiston's Son & Co., 1939. Cloth, \$5.00.

The discovery of the value of sulfanilamide in the treatment of acute infections has acted as a tremendous stimulus to further investigations of chemical agents in therapy. Not since Ehrlich's discovery of arsphenamine for the treatment of syphilis has chemotherapy played such an important part in medicine as it does today.

Findlay's book on the recent advances in chemotherapy is timely and authoritative. The author reviews the recent work on various agents used in the treatment of parasites with such chemical substances as hexylresorcinol, carbon tetrachloride, tetrachloroethylene, and antimony compounds. There is an excellent chapter on alkaloids in amebiasis. Other chapters are devoted to quinine derivatives in malaria, chemotherapy of trypanosomiasis, all the arsenic compounds in syphilis, gold in tuberculosis, and the chemotherapy of leprosy. The importance of sulfanilamide and related compounds is indicated by the fact that almost one half of the book is devoted to these substances. The author closes with an excellent chapter on the chemical treatment and prophylaxis of virus infections.

No physician can be up to date without a thorough familiarity with material in the book. It is well written and highly recommended.

WILLIAM S. COLLENS

**Trauma and Internal Disease. A Basis for Medical and Legal Evaluation of the Etiology, Pathology, Clinical Processes Following Injury.** By Frank W. Spicer, M.D. Octavo of 593 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1939. Cloth, \$7.00.

The author presents a careful study of the role of trauma as an etiologic factor in the causation of disease of the viscera and bodily structures, and discusses the etiology, pathology, clinical processes, and end-results of serious or apparently trivial injuries. He also discusses the early or late manifestations and effects of trauma upon a healthy organ or structure and also upon organs or structures that present evidence of pre-existing disease.

The book is divided into twenty-five chapters dealing with trauma and the brain, spinal cord, respiratory system, heart, lungs, etc., in a very thorough manner. In addition to being a valuable reference for the medical practitioner and surgeon, it should also be of aid to the legal profession.

RALPH F. HARLOE

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The medical profession has repeatedly expressed itself in favor of the development of adequate hospital and laboratory facilities *in communities needing them*. It has long urged *local* administration

and control of medical institutions, even when erected with federal funds. If the project outlined by President Roosevelt really accepts these principles, as first descriptions seem to indicate, he may count on the wholehearted cooperation of organized medicine to bring it to successful fruition.

## Health for Labor

The American Labor Party is trying to win workers over to its health program by means of a bulletin issued periodically under the auspices of its Committee of Medical and Allied Professions. The Party appears determined to present the medical issues of the day fairly and to demand a square deal for the healing professions under whatever program is ultimately adopted. Unfortunately, its medical policies, as set forth in "Health Security Bulletin," appear to have been shaped by the more radical elements of which it is seeking to purge itself. Insistence on compulsory health insurance at this time, when medical and lay opinion are united on the merits of voluntary nonprofit medical expense indemnity insurance, is likely to sabotage the development of a harmonious progressive health program. Needless to say, this would cause satisfaction among Communists in and out of the A L P.

Except for the issue of compulsory insurance, there is no vital disagreement between the health programs of organized medicine and of the American Labor Party. Both favor state medical aid for the indigent and medically indigent. Both want the maintenance of the traditional doctor-patient relationship and professional participation in the administration of health plans.

The advocates of compulsory sickness insurance, in the American Labor Party as elsewhere, try to confuse the issue by arguing that voluntary insurance would not provide for all who need medical aid. This is true—but neither would compulsory insurance. The insurance principle—whether on a voluntary or compulsory basis—is applicable only to those employed at salaries large enough to permit the payment of premiums without serious deprivation. The unemployed and workers earning mere subsistence wages must receive state help. It is folly, in the name of health, to deprive small wage-earners of health essentials by levying a weekly tax on their already inadequate earnings. The unemployed do not come within the purview of compulsory insurance any more than voluntary.

The "Health Security Bulletin" of the American Labor Party argues that since voluntary insurance almost always leads to compulsory, we might just as well start with the latter. On the contrary, this seems to us another reason for not insisting on compulsory insurance until voluntary schemes have had their chance. If

voluntary insurance works out, without the creation of a vast parasitical political bureaucracy, it will be to the advantage of the working class which, in the long run, pays the costs of government. If it fails, the profession will have less reason to oppose compulsory schemes and many valuable administrative lessons will have been learned.

The American Labor Party must realize that the welfare of the working classes is indispensable to the medical profession, the vast majority of physicians have their practice among the poor and middle class. Since medicine and the American Labor Party are united on many of their health aims, would it not be a constructive step for the A L P to postpone its campaign for compulsory insurance, pending the results of voluntary medical expense indemnity, and cooperate with the profession for the enactment of measures on which they are agreed?

### Total Disability

Physicians are often called upon to testify as to the degree of disability which a patient has sustained as the result of a disease or accident. Frequently, the doctor's testimony is of paramount importance in guiding the Court in its evaluation of the merits of a plaintiff's suit to validate his claim covered by a health, accident, or disability insurance contract. Some of these contracts read, in effect, that payment will be made to the policyholder if bodily injury or disease renders him *totally and permanently disabled* so as to prevent him from engaging in *any* occupation and performing *any* work for compensation.

In this connection, the decision of the St. Louis Court of Appeals in Missouri<sup>1</sup> brings us an important opinion, and we quote from the medicolegal abstracts of the *J A M A*: "To be permanently and totally disabled, continued the court, within the meaning of a policy of insurance such as the one sued on in this case, it is not necessary that the insured be inert and absolutely helpless, it is sufficient if it is shown that his infirmity renders him unable to perform, in the usual and customary manner, substantially all the material duties of his own occupation, business or profession or of any other occupation, business or profession which his *age, training, experience, education and physical condition would fit him for except for his disabling infirmity*." [Italics ours.]

The significance of the Court's opinion lies in the last part, namely, that it considers the disabling character of the infirmity in relation to age, training, experience, and education of the individual. Therefore physicians, when called to testify in such cases, should

<sup>1</sup> J. A. M. A. 114 187 (Jan. 13) 1940



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## URGENT

### C—4 and Progress Reports of Workmen's Compensation Cases

The following letter from Industrial Commissioner Frieda S. Miller shows the great importance to all concerned of the *prompt* filing of reports and the necessity of sending in to insurance carriers and the Department of Labor detailed progress reports every three or four weeks

'The free choice medical provisions of the Workmen's Compensation Law have placed great responsibility on the medical profession for the proper functioning of certain aspects of workmen's compensation

"The prompt and frequent filing of adequate medical reports by attending physicians does much to expedite the payment of compensation to injured workmen as their wages would have been paid. Delays in the filing of reports, and the filing of inadequate reports, on the other hand, tend to thwart the intent of the law that compensation shall be paid promptly and periodically

"Insurance companies in explaining delay in making the first payment and in refusing to continue payments pending later hearings insist that the absence of medical reports or inconclusive medical reports from attending physicians is responsible. They will point out that the medical reports have not been received, or that there is no indication of need for further treatment. Medical reports frequently fail to indicate that the disability continues, or state, in stereotyped form from report to report, that the same physical findings are continued without indicating what progress has been made.

"The effect of the delays in making payments is to circumvent the explicit intention of the Workmen's Compensation Law, that benefits be paid as wages are paid. Formerly employers and insurance companies could be held to have knowledge of the claimant's need for treatment since they themselves were responsible for providing medical attention.

"The law now provides that unless the claimant's claim is controverted, payment shall become due on the fourteenth day of disability and shall be paid within four days thereafter. Legislation is being proposed which will assess the carriers for failure to pay within the prescribed period. In addition to this assessment there will be another provided for every case in which notice of controversy is filed and an award subsequently made. It is hoped that these proposals will bring about the prompt payment of compensation to injured workmen.

"It would hardly be fair, however, to assess insurance carriers, unless adequate medical reports on which to base their decisions can be made available in time. The complete cooperation of attending physicians is therefore urgent if early and continuous payment of compensation is to be achieved."

In other words, file reports promptly and keep the carrier and the Department of Labor informed of the medical progress of the case

All physicians are urged to cooperate

DAVID J. KALISKI, M.D., *Director*

*Bureau of Workmen's Compensation, Medical Society of the State of New York*

give mature consideration to this phase of the problem so that they can materially contribute to the solution of what constitutes *total disability* in a given case

### Cerebral Damage from Hypoglycemia

In the treatment of diabetics with insulin, and particularly with protamine zinc insulin, there is ever present the possibility of inducing a state of hypoglycemia. The potential danger of this lies in the fact that one cannot predict the occurrence of such a reaction, since the response to insulin therapy varies not only in different individuals but often in the same patient at different times. Furthermore, the usual prodromal signs and symptoms of an impending hypoglycemia are frequently so altered when protamine zinc insulin is used that the recognition of this state is not readily apparent to the patient.

Layne and Baker<sup>1</sup> have observed 7 cases of diabetes wherein a hypoglycemia produced definite cerebral damage. As the result of this, 4 died and postmortem findings confirmed the clinical observations. In the younger age group particularly, where death is less apt to occur, permanent disabilities in the neurologic and mental status follow the hypoglycemia. Diabetics who have an associated chronic disease which in itself may affect cerebral tissues are extremely susceptible to the slightest degree of a reduction in the blood sugar below the normal. Here, too, the cerebral damage is often irreversible. Layne and Baker further stress that one must be cautious in administering insulin to a comatose diabetic since a hypoglycemic coma may easily be mistaken for a diabetic acidosis.

If the patient survives the injury to his brain tissues, the return of the blood sugar to a normal or slightly elevated level has but little effect on the course of the neurologic picture. Therefore not only the patient, but his family as well, should receive detailed instruction in the recognition of the earliest signs of hypoglycemia so that the physician can be immediately called to forestall the development of a severe reaction.

<sup>1</sup> Layne J A, and Baker A B. Minn. Med. 22 771 (1939)

### Sale of Hypnotic or Somnifacient Drugs

On January 21 the Department of Education and the Department of Health of New York State announced, among other new rules which had been adopted by the Board of Regents, a very important rule, No. 30, as follows:

No hypnotic or somnifacient drug intended for internal use shall be sold at retail or dispensed to any person except upon the written prescription of a physician, a dentist or a veterinarian, and the prescription shall remain on file in the pharmacy where compounded. Such prescription shall not be refilled if it bears indication by the physician, the dentist or the veterinarian that it is not to be refilled.

## URGENT

### C-4 and Progress Reports of Workmen's Compensation Cases

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# PRIMARY ILEOCECAL TUBERCULOSIS

BURRILL B. CROHN, M D, and HARRY YARNIS, M D, New York City

(From the Medical Services, Mount Sinai Hospital)

LESS than ten years after Robert Koch had stained and had cultured the tubercle bacillus, there appeared in the literature of France and of Germany, clinical accounts of cases of so-called primary intestinal tuberculosis. Most of the case histories which followed were derived from surgical operations and were considered as instances in which the ileocecal region was the primary seat of tuberculous infiltration. The disease process was restricted to this area, producing a localized effect susceptible of successful resection. Dissemination of the infection was not observed in these earlier primary cases, the lungs, bones, joints, and other viscera being exempt in the earlier or operable stage.

The history of the spread of the concept of primary intestinal tuberculosis is interesting as denoting the acceptance of the idea by the profession, and its almost immediate popularization.

General interest in the subject is credited to Hartman and Pillet,<sup>1</sup> who in 1891 operated upon two such cases, they regarded the disease as an attenuated form of localized tuberculosis analogous to lupus. Their clinicopathologic descriptions are loose and unsupported by bacteriologic proof.

In 1898, Conrath<sup>2</sup> was quoting authors such as Klebs and Leube, who had already then doubted that primary ileocecal tuberculosis ever occurred, yet he himself proceeded to abstract from the literature 85 such cases, many of which seemed plausible, but many others of which were unquestionably mixed forms of pulmonary phthisis and secondary intestinal tuberculosis. He emphasized the longevity and excellent prognosis following successful localized resections, he leaves the subject, however, confused.

In 1900, Hugel<sup>3</sup> described 3 similar primary cases, in all of which tubercle bacilli were found in the sections and in all of which the hyperplastic ileocecal resected mass fell into the conventionally accepted pathologic category. These seem to be bona fide cases.

Lartigau<sup>4</sup> published a case of diffuse ileal and colonic tuberculosis apparently primary to Addison's disease, bacteriologically confirmed.

But soon the confusion begins or becomes intensified, for with the greater popularization of the subject, the literature is observed to contain many case reports in which the various factors lack clear-cut consideration. Before the advent of radiography, involvement or non involvement of the lungs as a primary effect rested on physical signs, on auscultation and percussion, methods which we realize today were hardly efficient in delineating early phthisis as a possible primary focus whence might be derived the secondary intestinal deposit.

In nearly all the operated cases the local descriptions are excellent, but the general physical status of the patient is treated with insufficient mention, and the bacteriologic and animal confirmation of the hypothesis of a primary intestinal infection remains mostly unproved.

Yet the subject becomes a popular one and the literature grows apace until shortly, or even up to comparatively recent times, the impression is gained, by listening to discussions by clinicians, or by reading current literature, that ileocecal tuberculosis is indeed a common disease to be expected and encountered in all lower right abdominal explorations. Every mass found in the lower right quadrant was, if not neoplastic, then probably tuberculous, regardless of whether tu-

*Read at the Annual Meeting of the Medical Society of the State of New York, Syracuse, April 27, 1939*

bercle bacilli were found in the slides or whether animal inoculation verified the original supposition

With the more latterly recognition of the greater frequency of nonspecific granulomatous processes of the entire alimentary tract,<sup>5,6,7</sup> and particularly of the terminal ileum,<sup>8,9</sup> it became apparent that the neglect to recognize these nonspecific varieties was due to the fact that they had previously all been considered as tuberculous processes whose specificity, though unproved, was still the most likely hypothesis

With the acceptance of granulomata, terminal ileitis, and regional enteritis, as well as of right-sided colitis and their mixed forms, it became apparent that the percentage of cases of true primary intestinal tuberculosis seemed to follow the law of diminishing returns, the whole question of the incidence and frequency, if not the actual clinical entity of primary intestinal tuberculosis, called for reconsideration. To a large extent the nonspecific granulomata have replaced almost entirely the tuberculous concepts. In our own experience in the last eight years, we have recognized ileitis, right-sided or regional colitis in 130 instances, during which time we saw so few proved cases of primary intestinal tuberculosis that we were led to doubt the very existence of such a specific form of intestinal infection

With these doubts and skepticisms in mind we have considered it well worthy to reopen the question of the relative incidences of specific and nonspecific forms of ileocecal inflammations, to note their relative frequencies, and to reappraise more critically the concept of primary ileocecal tuberculosis

*The "Case" for Primary Intestinal Tuberculosis*—In the concept of Calmette<sup>10</sup> and of his associate, Guern,<sup>11</sup> the intestinal mucosa is the portal of entry in the largest percentage of cases of tuberculosis. Calmette<sup>10</sup> considered the intestinal mucosa as pervious to viable tubercle bacilli, the organism penetrating the unbroken or the traumatized mucous membrane of the crypts of Lieberkuehn

to reside in the mesenteric lymph nodes as caseous or calcified primary effects. Thence, in course of time, the spread took place by way of the abdominal lymphatics to the thoracic duct, to the bronchial lymph nodes, and eventually to the lungs or to the general circulation. In his view, the intestinal mucosa was the "chancre of inoculation," and bovine tubercle bacilli derived from contaminated cow's milk the favorite source of the infecting material

The original portal of intestinal entry was rarely the site of the lesion, due to the fact that the organisms traversed the mucous membrane without residing therein, and penetrating freely, became engulfed in the nearest regional lymph nodes, the mesenteric, there to create the first station of tubercle formation. Certain realities made this hypothesis a plausible one. A large percentage of milch cows in the beginning of the century were infected with tuberculosis, a goodly percentage of the drinkable milk might therefore have contained viable bacilli, pasteurization was not then practiced

By actual feeding experiments to young calves and other laboratory animals, Villemun<sup>12</sup> was able to produce or to reproduce intestinal tuberculosis, the virus or inoculum was fed in the form of the infected viscera of other tuberculous cows or of macerated viscera from autopsy material of human tuberculosis. Intestinal tuberculosis in animals, followed shortly by generally disseminated tuberculosis, could thus be reproduced

Outside of France the views of Calmette did not meet with general approbation, the fact remaining that primary intestinal tuberculosis was rare, and that the percentage of bovine infections in human beings was relatively infrequent, though not inconsiderable.

The Royal Commission in England in 1931<sup>13</sup> typed a total of 1,597 cases of tuberculosis in man and found an incidence of 22.2 per cent of bovine infections. The occurrence of bovine infection in man varied with age periods, particularly common in the first four years of life and declining with advancing years

Blacklock,<sup>14</sup> in England, found that 80.4 per cent of all abdominal tuberculosis in children was bovine, the Royal Commission had reported that of the 19 cases caused by the bovine organisms, 73.7 per cent were intestinal tuberculosis. They found that in 372 autopsies of tuberculous children, 123, or one-fifth, were of bovine origin.

Mitchell,<sup>15</sup> in Edinburgh, examined 72 fatal cases of cervical tuberculosis in children under the age of twelve years and found that 90.3 per cent of the cases yielded the bovine organism.

In New York City, Park and Krumwiede<sup>16</sup> isolated the human organisms in all but one of 305 adults, while in 117 children under the age of five years, 25 (21.4 per cent) yielded the bovine strain of the organism.

Thus our attention becomes focused on three facts: (1) the bovine strain is capable of infecting human beings, (2) it is most commonly found in children during the years when milk drinking forms the essential part of their diet, (3) that abdominal tuberculosis represents by far the greatest percentage of infected cases. This, coupled with the fact that as recently as 1917, 10 per cent to 35 per cent of our rural milk herd were positive tuberculin-reactors, would lead us to expect a high incidence of primary intestinal tuberculosis in internal medicine and particularly in pediatrics.

*The "Case" Against Primary Intestinal Tuberculosis*—Does the clinical experience bear out the hypothesis of Calmette, and what is actually our experience with the incidence and symptomatology of primary intestinal tuberculosis in man?

There are few figures in modern clinical medicine which attempt to state the incidence of primary intestinal tuberculosis, nor would such figures be likely to be very reliable. Gay<sup>18</sup> questions that primary human adult intestinal tuberculosis actually exists, Herrick<sup>19</sup> states that in the Lakeside Hospital, there were no primary intestinal cases in 800 autopsies, and that at the Cleveland Hospital, only 1 case in 2,900 autopsies. Beitzke,<sup>20</sup> in 1908, in 100 autopsies, found only 13 cases

of primary intestinal tuberculosis, accepting only proved cases. Ferris,<sup>21</sup> at New York Hospital, in 1937, found in 1,190 autopsies only 33 cases of calcified tuberculous lymph nodes in the mesentery, in 3 of these cases he found also calcified areas in the intestinal mucosa. Yet the histologic verification of the tuberculous nature of these latter cases is unconvincing and in only 1 case was one tubercle bacillus seen in one slide only.

Tedious as it is to review and criticize the more recent literature, it is necessary to do so in order to arrive at some conclusion concerning the trustworthiness of their reports and to deduce a correct conclusion regarding the pathologic incidence of the disease.

Richter,<sup>22</sup> in 1906, regarded ileocecal tuberculosis as only an accidental infection with cicatricial swelling, he and others have considered the supposition that the original process in the intestine was actually a nonspecific granulomatous one in which a few stray tubercle bacilli were incidentally enmeshed. Successfully he operated upon 3 such cases, all the patients being subsequently reported as well. But his first 2 cases were possibly, if not probably, typical terminal ileitis in which no tubercle bacilli were ever found, in his third case, acid-fast organisms were detected in only one slide. His cases were all young people under 30 years of age, he made no mention of having sought for possible tuberculous foci elsewhere in the body. When one considers that regional ileitis is also a disease of youth, the possibility of confusion must be strongly entertained.

Brunner<sup>23</sup> cited 2 personal cases of which 1 had obvious pulmonary tuberculosis, no bacteriologic studies were made in either case. He does feel however, with others, that the intestinal lesion remains stationary because of the low virulence of the infecting organism and the attenuation of its strength (bovine?) in the human intestinal tract.

Counsellor,<sup>24</sup> in 1929, reported a case of primary tuberculosis of the ileum in a woman 40 years of age. The lesion was high in the ileum, 90 cm from the ileo-

cecal valve, thick, plastic, and granulo-matous. A nodule was said to be proved tuberculous, but the details of the verification were missing. It should be recalled that regional ileitis occurs also in isolated patches high in the ileum and jejunum and resembles in most particulars a tuberculous lesion, though actually non-specific in origin.

Counsellor's case may have been a true case of primary tuberculosis, though his facts are not convincing since there is no exact description of histology nor any reference to a possible tuberculous area elsewhere in the body.

Dixon and Bearer<sup>25</sup> report a case of nonspecific granuloma of the ileum and cecum with perforating sinuses; they found tubercle bacilli in one lymph node. They state that most of the lesion was healing or healed, and now nonspecific in character. It is hard to deny the tubercle bacilli in the lymph node and yet all the other characteristics of their case smack of typical nonspecific ileitis and colitis.

Crossman,<sup>26</sup> in 1936, published what seems to have been an indisputable case of diffuse primary tuberculosis of the whole ileum. Tubercle bacilli were found in all of the stained specimens and the lungs are distinctly said to have been free of the disease. He speaks of the process as one of local allergy to a bovine strain of the bacillus, with an exaggerated local reaction. He considers that the tuberculous organism played a relatively small part in the process.

To summarize the literature, the opinion of bacteriologists varies from those of Calmette who regarded the intestinal point of origin for human tuberculosis as the most common one, to those who deny entirely the existence of primary intestinal tuberculosis. The surgical fraternity has published many cases of supposed initial intestinal tuberculosis, but in most of the published material true bacteriologic verification is missing and the differentiation from nonspecific granulomata, particularly before the recognition of regional ileitis and allied nonspecific processes, is completely omitted.

Only the pediatricians seem to offer a very minimal incidence of true primary intestinal effects, most of these in children below four years of age, in the milk-drinking period, and most of these of bovine origin and nature.

Because of the great tendency to confuse specific processes (tuberculous) at the ileocecal junction with nonspecific processes, most of the literature before 1932 is unreliable. Both the gross and histologic appearances of specific and nonspecific processes are very similar, unless careful bacteriologic studies and animal inoculations are performed, the two cannot be differentiated with any likelihood of accuracy. The lack of mention and the lack of search for primary foci of infection elsewhere in the body were notoriously absent in many of the published cases.

Personal Experiences with Primary Intestinal Tuberculosis. A careful survey and review of all autopsy material and all surgically resected specimens has been made at Mount Sinai Hospital covering the period of the last twelve years (1926 to 1938). After carefully reviewing the pathologic material of the past twelve years (4,800 autopsies and all the surgical material), after eliminating all the granulomata of nonspecific origin and nature, we are left with 8 cases of what we must accept as primary intestinal tuberculosis of conceded histologic and gross structure.

In the 4,800 autopsies we were able to substantiate only one case of primary intestinal tuberculosis, an extremely low incidence, and one that bears out the statements from the Cleveland Hospitals. The other 7 instances were culled from the general surgical pathologic material and represent resections in active cases. Apparently, then, in searching for clinical material of this type, the surgical resections are more likely to be rewarding than is the autopsy material.

The fact that the Mt. Sinai Hospital is a general hospital, in which known tuberculous cases represent only a small percentage of clinical material, does not vitiate these statistics. Institutions



TABLE 1—PRIMARY INTESTINAL TUBERCULOSIS—CLINICAL DATA

Case	Age	Sex	Nat	Duration	Diarrhea	Temp	Loss Wt	Mass	Fistula	Chest X-ray
AA	18	M	USA	1 1/2 yr	+	100	10 lb	+	0	Negative
TR	29	F	USA	8 yr	++	101	25 lb	+	ABD	Negative
BB	12	F	USA	1 mo	++	102	15 lb	+	0	Negative
WK	18	M	USA	4 mo	+	102	30 lb	+	Rectal	Negative
HS	18	M	Porto Rico	1 yr	+	102	15 lb	+	0	Negative
CB	55	F	Porto Rico	5 mo	+	100	10 lb	+	0	Negative
EP	28	F	Negro	1 yr	++	101	17 lb	0	Rectal	Negative
AG	22	M	Hindu	2 week history			chills, fever			Miliary the
							fast bacilli in spinal fluid			

TABLE 2—PRIMARY INTESTINAL TUBERCULOSIS—OPERATIVE FINDINGS

Case	Segmental Involvement	Pathology	Bacteriology	Result
AA	Ileum Cecum Resection	Hyperplastic tbc	Slide neg	Died
TR	Ileum Cecum Colon Resection	Ulcerating tbc	Slide guinea pig negative	Recurrence
EB	Ileum Cecum Resection	Ulcerating tbc	Tbc in slide guinea pig neg	Well
			Mantoux neg	
WK	Cecum Resection	Ulcerating tbc	Slide neg	Recurrence
HS	Cecum, Colon Resection	Hyperplastic tbc	Slide neg von Pirquet pos	Well
CB	Cecum Biopsy	Hyperplastic tbc	Slide neg	Recurrence
EP	Ileum Cecum Colon Biopsy	Hyperplastic tbc	Tbc in rectal fistula (pus)	Recurrence
AG	Postmortem	tbc ulcerations in terminal ileum	caseous tbc of the mesenteric nodes and thoracic duct,	
		generalized miliary tuberculosis		

known as specialized hospitals for tuberculosis are of two kinds, those handling phthisis and those devoted to the treatment of tuberculosis of bone, joint, and glands. In neither of these institutions would primary intestinal tuberculosis be likely to be discovered. On the other hand, a general institution with a large surgical and abdominal clientele would offer a much better chance of early perception and early resection of a primary intestinal focus.

An analysis of these 8 cases of presumably proved intestinal tuberculosis is most enlightening. The age limits fall between twelve years for the youngest and fifty-five years for the oldest person, or as follows:

AGE INCIDENCE OF 8 CASES OF PRIMARY INTESTINAL TUBERCULOSIS

12 years	Female
18 years	Male
18 years	Male
18 years	Male
22 years	Female
28 years	Male
29 years	Female
55 years	Female

It will be seen that almost all of the cases occurred in young persons in the second and third decades of life, the only exception was the female, fifty-five years of age. This fact would coincide with the well-accepted dictum in the literature that intestinal tuberculosis, when pri-

mary, is a disease of youth. We saw no cases in the first years of life. If the infection is really due to bovine strain and is an effect of contaminated milk drinking, then we are seeing the cases not at the period of earliest invasion (infancy) but in the later adolescent years when the primary mesenteric form no longer remains localized but has now proceeded to the secondary stage of invasion of neighboring intestinal viscera. In the thoracic type of tuberculosis, the infection in the bronchial lymph nodes extends by lymphatic invasion to the apices of the lungs and its parenchyma. In the abdominal type, the mesenteric lymph node breaks down and invades, by retrograde lymphatic extension, its neighboring viscera, namely, the intestinal mucosa and serosa. This second stage presumably follows the first infestation only after a lapse of many years.

The sex distribution was exactly even, namely, 4 males and 4 females. Of the 8 cases only 4 were white natives of the northern states of this country. Two patients were Puerto Ricans, 1 a Negro, and 1 a Hindu. In the instances of these latter 4 cases, it may be presumed that in their childhood they were possibly or probably exposed to unpasteurized raw milk of tuberculous contamination. While this cannot be proved as a fact, it is a presumption.

**Pathology** The pathologic material was obtained in 7 instances from surgically resected specimens, in 1 instance only from a complete autopsy (Table 2)

The gross lesion as described varies from simple, shallow, discreet, multiple ulcerations to ulcerations with granulomatous reactions and with localized mass formation. In some instances true hyperplastic ileocecal tuberculosis with or without stenosis is represented. In one instance a stenosing hyperplastic lesion of the ascending colon was observed, in 2 cases tuberculous fistula-in-ano were complicating factors.

The gross and microscopic appearances were typical of the lesion of ileocecal hyperplastic or ulcerous tuberculosis as so ably described in textbooks such as Brown and Sampson,<sup>27</sup> and Berard and Patel.<sup>28</sup> It is questionable whether anyone could differentiate by inspection the primary type of lesion from the secondary type of extension which occurs as a late complication or as a terminal event in the pulmonary form of tuberculosis. Grossly, the lesion could not always be differentiated from nonspecific granulomata. The discreet ulcerous type and those involving only the cecum were quite characteristic of primary tuberculosis. The hyperplastic granulomata of the cecum and ascending colon with minimal involvement of the ileum resembled very closely regional or segmental right-sided colitis, only a microscopic and careful bacteriologic examination being capable of a clear differentiation. True terminal ileitis without colonic participation could rarely today be mistaken for hyperplastic ileocecal tuberculosis.

In all cases, the mesenteric lymph nodes were enlarged and firm and definitely pathologic. In one case only was true caseation seen, in the remaining cases the mesenteric nodes of tuberculosis resembled those seen in ileitis, characteristic miliary tubercles being often absent, at least on gross inspection.

In one fatal case the autopsy disclosed the extension of a caseous mesenteric lymph node to the thoracic duct. Two cm above the diaphragm the thoracic

duct was ulcerated and contained necrotic tubercles, slightly above this area the thoracic duct was occluded by caseous necrotic material. In this instance death was due to a generalized miliary tuberculosis involving the abdominal and thoracic viscera. This case is extremely important as it marked a true and clear-cut instance of the transition of a primary intestinal focus to a disseminated miliary form of general disease.

**Symptomatology** The duration of active symptoms varied from two weeks to eight years, averaging one and one-half years for all the cases. Diarrhea (moderate in nature), low-grade temperature, and abdominal pain (colicky in nature and associated with defecations) were the principal outstanding clinical features. Loss of weight was considerable, and a secondary anemia usually a constant phenomenon.

Sooner or later almost all cases exhibited a mass in the lower right quadrant. The mass is described as small and globular, or as sausage-shaped, movable, and tender. The appearance of anal fistulas containing caseous granulomatous material was in 2 instances an important confirmatory sign of the nature of the lesion (Figs 1 and 2).

It will be noted however, that these symptoms, even including the perianal fistulas, are in no way dissimilar to those seen in ileitis and segmental or right-sided colitis. Hence the confusion in the past, and for that matter, in the present, in differentiating the specific tuberculous from the nonspecific forms of ileal and cecal disease.

Radiographically the two types, specific and nonspecific, fail of complete differentiation. The typical "string-sign" of true terminal ileitis is rarely seen in tuberculosis. But the phenomenon of irritable nonfilling of the cecum and ascending colon, as demonstrated by Sampson and by Sterlin, while more typical of tuberculosis, is also seen in right-sided or segmental colitis. Strictured areas are typical of tuberculosis and do not occur in regional colitis.

**Prognosis** As was to be expected, the

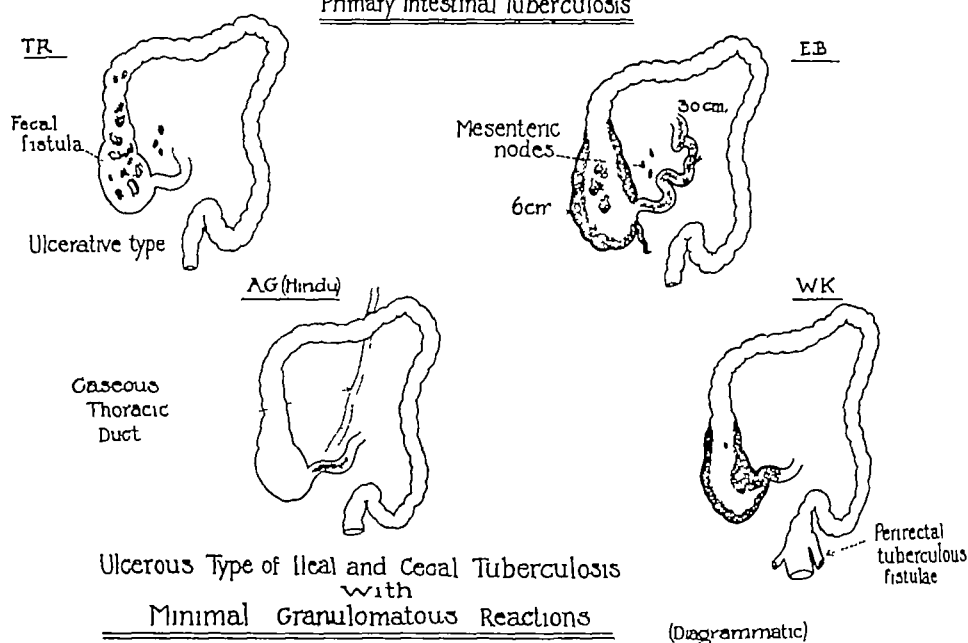
Primary Intestinal Tuberculosis

FIG 1

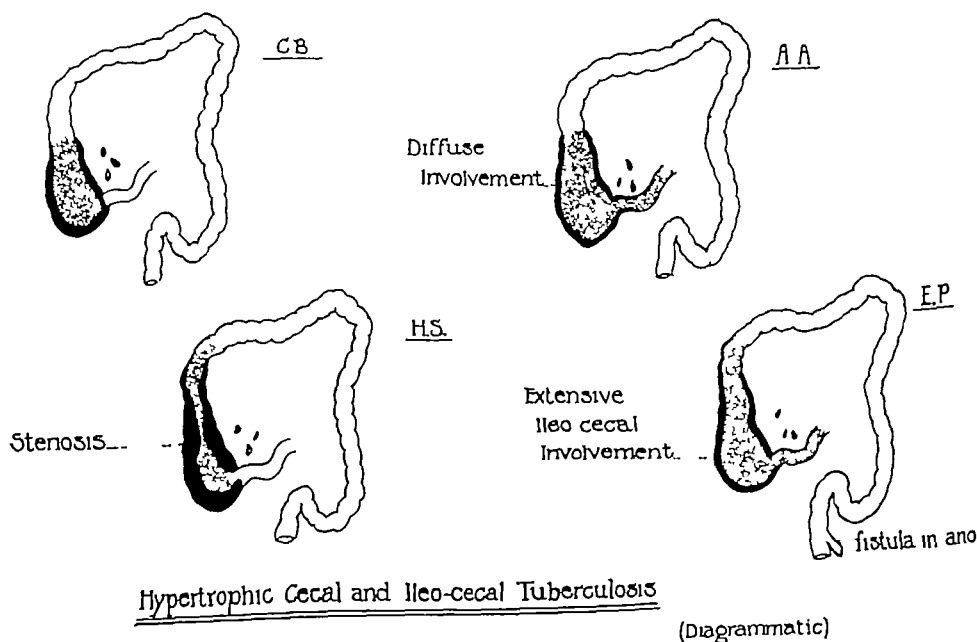
Primary Intestinal Tuberculosis

FIG 2

prognosis of ileocecal tuberculosis, even after resection, was not good. One case was not improved, 3 cases recurred extensively, 2 cases died. In 2 instances favorable results were achieved, 1 patient having remained apparently well when last seen.

**Bacteriologic verification.** One of the most important questions arising in the consideration of these 8 cases concerns itself with the bacteriologic confirmation of the diagnosis. In all the instances the diagnosis was made upon typical histologic evidence of miliary tubercle formation with mononuclear cells and giant cells characteristic of classical tuberculosis. The data in the 8 cases were as follows:

BACTERIOLOGIC DATA IN 8 CASES OF PRIMARY  
INTESTINAL TUBERCULOSIS

Case	
T. R.	Caseous lymph nodes no acid-fast organisms negative guinea pig inoculation
E. B.	Typical tubercle formation acid fast organisms in mesenteric lymph nodes positive negative guinea pig and rabbit inoculation
A. G.	Caseous tuberculous lymph nodes diffuse miliary tuberculosis (autopsy)
W. K.	Typical miliary tubercle formation
A. A.	Typical miliary tubercle formation no bacilli in slides
H. S.	Typical miliary tubercle formation no bacilli in slides
E. P.	Typical miliary tubercle formation, tubercle bacilli in pus from anal fistula
C. B.	Typical miliary tubercle formation

It will be seen that our greatest reliance was placed upon the histologic diagnosis of true tubercle formation with giant cells and characteristic caseation, the slides being taken from the intestinal lesion and the adjoining mesenteric lymph nodes. In 2 instances only, were typical acid-fast organisms seen in the slides, in one of these cases inoculation of rabbits and guinea pigs with fresh pathologic material failed to reproduce the disease in these laboratory animals. We are to be criticized for not having performed more often animal inoculation with suspected tissue material. It is remarkable, however, that in the 2 instances when attempts were made to transmit the inoculum to animals, both failed to reproduce the disease. Perhaps the acid-fast organisms were too attenuated to cause infection in the animals, surely an evidence of the attenuation of the strength of the offending

bacilli in both of these cases. We believe that the ultimate scientific proof of the existence of the tuberculous nature of these cases would require not only a histologic verification, but the finding of the acid-fast organisms in all of the slides as well as of successful inoculation of guinea pigs or of rabbits with the suspected pathologic material. This ultimate proof we cannot furnish in these cases, and yet we are not ready to dismiss these specimens as nontuberculous, but believe and hope that most pathologists and most bacteriologists will agree in accepting the specific nature of the primary intestinal effects as we have described them. Many bacteriologists will refuse to accept as tuberculous any material that fails to produce the disease in guinea pigs, since the latter animals are highly susceptible to even a very small number of viable organisms. Many pathologists will decline to accept as tuberculosis, slides and specimens in which organisms of the acid-fast variety cannot be demonstrated. Yet the clinical nature of the disease, the course and spread, the associated lesions and other organs, and the typical histologic appearance of the miliary tubercles have led us, consciously and critically, to accept these 8 cases as tuberculous in nature and as caused by the mycobacterium of tuberculosis.

For that matter, if the accepted literature on primary intestinal tuberculosis were to be strictly and critically analyzed, and if one were to exclude and eliminate all those published cases lacking the demonstration of acid-fast organisms and lacking successful animal inoculations, there would not be material left to represent a single convincingly proved case. In the published surgical case reports there is practically no mention of animal inoculation and I can recall no instance where both bacilli were shown in slides and positive guinea pig transmission was successfully carried out.

**Nonspecific Granulomata.** During the twelve years represented in the above study we collected 8 cases of presumable primary ileocecal tuberculosis. During

the last six years (or half that time) we have encountered 130 cases of nonspecific regional ileitis and segmental colitis. The discrepancies between the incidences of these two forms of disease are most striking. Had we known nonspecific ileitis before 1932 we would undoubtedly have added a considerable additional number of cases to the 130 specimens actually studied.

Evidently, the nonspecific granulomata, ileitis, and regional colitis far outnumber primary intestinal tuberculosis as a clinical finding in the ratio of 32.5 to 1. The relative scarcity of intestinal tuberculosis, as of today, in comparison with the nonspecific forms, may be explained on several grounds. The primary reason consists in the fact that all these nonspecific forms, like ileitis, were previously regarded as tuberculosis, though the scientific proof was carelessly lacking or was rarely sought for. By eliminating the nonspecific forms from all the right lower quadrant granulomata, we find, on analysis, that very little remains as true tuberculosis.

In the second instance, primary intestinal tuberculosis, if ever a frequent disease, seems now definitely on the wane. This is to be accounted for by the fact, as pointed out by all bacteriologists, that bovine herd infestation by tuberculosis has been almost completely eliminated. Since May, 1918, from 30 to 49.6 per cent of milch cows in the State of New York have been slaughtered because of tuberculosis, in January, 1938, less than 0.46 per cent of the registered herd in this state were estimated to be carriers of bovine tuberculosis.<sup>17</sup> This means the practical elimination of infected milk, which, added to the widespread acceptance of pasteurization, means the wiping out of contaminated bacillus-carrying milk.

If primary intestinal tuberculosis is an infection of the human child, transmitted by milk contaminated with the bovine bacillus or tuberculosis, then the cause for the relatively greater paucity of such cases is seen in the highly successful and highly laudable work of our Health Departments

and State Dairy Commissions in eliminating bovine tuberculosis and insisting upon pasteurization of the bulk of milk carried to our markets.

The fact is that the nonspecific granulomata constitute the great bulk of cases of ileocecal hyperplastic disease. Ileitis alone far outnumbers primary intestinal tuberculosis, Hodgkin's disease, and multiple sarcomatosis, all combined.

In the differential diagnosis of lower right quadrant abdominal masses it is necessary, in teaching, to realize the greater frequency of ileitis and regional colitis, and to relegate to diseases of great rarity, primary intestinal tuberculosis, and other specific types of inflammation.

It may even be that shortly, with the continued success of public health measures and the vigilance of our praiseworthy servants, the entire concept and incidence of primary human intestinal tuberculosis will disappear as a clinical finding and a pathologic entity.

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# TREATMENT OF OPERABLE RECTAL CANCER

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**R**ECTAL cancer is a comparatively common disease. It is encountered most frequently in those of mature age, but it may occur any time after puberty. The incidence of this disease in America, according to statistics, is on the increase. This increase may be more apparent than real, due to the greater average age of the population. Cancer in this location lends itself to easy recognition. Its treatment constitutes one of the most important present-day surgical problems.

Early recognition of rectal cancer is very important from the standpoint of successful treatment. It is impossible to overemphasize the importance of this factor. The earlier the disease is recognized, the greater the possibilities of complete eradication. Early diagnosis is largely in the hands of the general practitioner, gastroenterologist, and internist. Seldom do patients first consult a surgeon for rectal symptoms. In the very early stages, symptoms may be mild and indefinite but they usually suggest to the patient that he has a rectum, and that something is abnormal in that section of bowel. Any alteration from the normal functioning of the bowels, characterized by constipation, increasing constipation, gaseous distention, mild attacks of cramp-like pain, especially in the left lower abdominal quadrant, a few drops of blood on stool or toilet paper, increased amount of mucus with stools, mild tenesmus, etc., are symptoms strongly suggestive of early new growth and are worthy of careful investigation. The above symptoms suggest the possibilities of cancer but a definite diagnosis can be made in the early stages only by very careful rectal examinations.

Rectal examinations consist of palpation of the rectum with the finger, and instrumentation with an electrically

lighted sigmoidoscope. The latter is a simple office procedure and may be completed within a few minutes without distress to the patient. Incomplete or careless examinations are to be condemned as they seldom reveal a satisfactory explanation of the symptoms, and frequently convey a false impression as to the presence of cancer. A higher percentage of early diagnoses would result from education of the laity to seek medical advice for all minor anal and rectal symptoms, and from an increased willingness of the profession to investigate all symptoms that suggest pathology in the terminal intestinal tract by a thorough rectal and sigmoidal examination.

In most instances a definite diagnosis of rectal cancer can be made by the experienced clinician, from clinical findings. However, there are atypical, nonmalignant tumors which closely resemble cancer, concerning which even the experienced may be in doubt. Removal of a rectum is an operation not to be undertaken lightly or without necessity. In order to avoid an occasional mistake, the clinical diagnosis should be confirmed by submitting a piece of tissue to a well-trained tumor pathologist for histological study before treatment is undertaken. If the first biopsy fails to show malignant change and the clinical appearance suggests malignancy, further sections should be submitted. From past experience it is quite evident that biopsies are frequently necessary. A number of patients with nonmalignant polyps and others with nonmalignant rectal pathology have been advised to have rectal resection, under the erroneous impression that they were suffering from cancer. The old idea of hastening the dissemination of cancer cells by taking a small piece of tumor tissue for examination appears

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to have little foundation. There is no real proof of such reaction. Only by routine biopsies, especially with atypical tumors, is the surgeon sure of avoiding the embarrassing mistake of removing a nonmalignant rectum or permitting a cancer which appears nonmalignant to reach an advanced stage before its true nature is determined.

The second step in the care of rectal cancer is the classification of patients as to treatment and prognosis. Patients may be separated into two main groups, namely, operable and inoperable. This classification is often possible after appraisal of routine laboratory, general physical, and rectal examinations. In a certain percentage of cases further studies are advisable, such as detailed investigations of the cardiovascular system, roentgenographic examinations of the chest, pelvis, and lumbar spine for metastases, and cystoscopic examinations of males where the tumors are on the anterior rectal wall adjacent to the bladder. From the above investigations one can determine the operability, or at least the advisability of an exploratory operation. At times it is difficult to determine the exact extent of metastatic and local disease without an exploratory laparotomy. The inoperable group comprises those patients who, because of extensive disease or very poor physical condition, are unsuitable for radical treatment. The operable group includes those patients for whom radical forms of treatment offer the greatest possibilities as to cure and palliation. The operable group, in accordance with the extent of the disease, may be subdivided into (a) early operable, (b) medium-advanced operable, and (c) borderline or advanced operable groups. They may be classified further as to the general condition of the patient or his ability to withstand treatment, into good, medium, and poor surgical risks.

One of the problems in treatment of rectal cancer is in selecting the treatment most suitable for the given case. The selection is enhanced by a working knowledge of the advantages and limitations of the recognized surgical procedures for re-

moving a cancerous rectum, and of the value of radiation therapy in this disease. Radical surgical removal of the tumor and adjacent tissues is the method of choice in most instances. Radiation therapy, also considered a surgical method, is of value in a certain percentage of cases. It may be employed, alone, to eradicate the disease, or used to supplement radical resection. In certain instances the surgeon has a choice of procedures, any one of which is likely to produce the desired result, while in other cases one particular form of treatment or type of operation suggests advantages additional to that of any other well recognized method.

The types of surgical operations which appear of greatest value and are employed most extensively, are first, those which include an abdominal as well as a perineal approach, and second, those which have only a perineal approach for removing the tumor. These may be completed after a preliminary abdominal colostomy has been constructed, or the resection may be done without exploration or an abdominal colostomy. In the latter, the sigmoid is brought down and used to form a perineal anus at the site of the incision. The above methods are almost standard procedures. Many surgeons, however, vary the technic slightly from that originally described by the authors. Selective surgical methods, whereby the chief objective is continuity of bowel and sphincter control, so as to avoid an artificial opening, are preferred by a few surgeons. Operations of this nature have a selective field in the early stages of the disease, but cannot be considered for routine employment in the more advanced operable stages. The limited dissection afforded by many of these operations too frequently results in incomplete removal and early recurrences.

Abdominoperineal resections appear to be the most ideal for eradicating rectal and rectosigmoidal cancer, as they provide for the widest dissection of lymphatic channels and adjacent tissues. Cancer in these locations spreads by continuity of tissue and by the lymphatic and blood

streams Dissemination by the blood stream is beyond the reach of surgical operation Extension by continuity of tissue or dissemination by the lymphatic route may still be within reach of the more radical dissections The preliminary abdominal approach affords the greatest possibilities for removing upward and lateral lymphatic channels, as well as a wide dissection of tissues surrounding the upper rectum and rectosigmoidal junction By the secondary or perineal approach the lower part of the dissection is continued and the condemned tissues removed A new pelvic floor is constructed and the patient retains a permanent abdominal colostomy Such thorough resections may be completed at one time, as advocated by Miles, or may be concluded in two stages, as suggested by Lahey, Coffey, and others

The one-stage abdominoperineal or Miles' type of operation is the surgical method of choice It is applicable for tumors located anywhere within the rectum and at the rectosigmoidal junction Patients are spared the anxiety and worry of two operations The perineal wound heals rapidly and hospitalization is comparatively short The percentage of cases for which this operation is suitable will depend upon the general condition of the patient and extent of disease It is most suitable for those in good or fairly good physical condition, who are fortunate enough to have their cancer recognized while in the early or medium-advanced operable stage of development.

Abdominoperineal resections in two stages, although less ideal in certain respects, appear to have a place in the treatment of this disease Two-stage procedures allow a wide dissection similar to that of the Miles' operation The chief objective of graded procedures is to give to the less fortunate cases the advantage of a wide dissection without exposing them to risks which they may be unable to withstand Of the two-stage procedures, we prefer the Lahey technic Two-stage resections are preferable when dealing with badly infected and markedly stenosing tumors in patients who require

abdominoperineal operations, but whose general condition is not the best, and who might be classified as medium and poor surgical risks The first stage, which is the minor of the two operations, exerts but a moderate strain upon the patient. It is seldom more than an abdominal exploration with the construction of a simple colostomy The first operation, however, seems to lessen the possibility of, or raise the resistance to, pelvic infection at the time of the second-stage procedure, thereby lowering the operative fatalities due to pelvic peritonitis The interval between operations, usually four or more weeks, permits a lessening of the tumor infection and a recognizable improvement in the general condition of the patient

Two-stage procedures are, at times, of value when dealing with advanced disease when the surgeon, after exploration, has real difficulty in determining whether or not the patient should be subjected to radical operation Under these circumstances, one may plan a two-stage procedure and do the first stage at this time. If the patient shows the usual improvement, the second operation can be completed However, if the patient fails to pick up, and continues to lose weight and strength, these factors are a fair indication that the condition is inoperable Although such patients may survive the second operation, the final results are seldom satisfactory, as practically all cases continue to follow the downward decline The few postoperative deaths which have occurred with our two-stage procedure, and those patients who have done very badly after the second stage, were those who failed to show a real improvement after the first operation

Abdominoperineal operations are gradually becoming more popular In our clinic, a much higher percentage of patients are now being operated upon by this method than five years ago Moreover, there is a gradual trend to the one-stage procedure Whether one-stage or graded procedures are employed will depend upon the operator and the class of patient that he is called upon to treat In the past, these radical types of resec-



tions were often avoided because of the high operative mortality that resulted from their use in the earlier years. The operative mortality in these resections, although higher than that of perineal extirpation, is being gradually reduced. In a small series of 90 cases, we had an operative mortality of 13.3 per cent. Ten patients were operated upon over five years ago. Seven of these survived the five-year period and 6 of them are now alive and well.

Perineal resection or extirpation of the rectum for cancer has been in use for over a century. Its popularity is largely due to the low operative mortality. Consequently, this method is most ideal for the aged and those patients who, because of poor physical condition, must be classified as poor surgical risks. The disadvantage for routine employment is the high percentage of local recurrences. This, undoubtedly, results from the limited dissection of the invaded lymphatic channels and adjacent tissues, especially when the tumor is situated high in the rectum. If the disease, at the time of operation, is in the early stages, the results obtained should be equal to that of any other surgical method. When the disease is widespread and beyond the reach of dissection, the results can be of only a palliative nature, rather than a longstanding clinical cure. This type of resection is most ideal for poor surgical risks with tumors situated in the mid or lower rectum.

Perineal resections may be carried out with or without abdominal colostomy. The construction of a preliminary abdominal colostomy permits exploration of the abdominal cavity to ascertain the extent of local or metastatic disease. Perineal resection without preliminary colostomy denies the surgeon the advantages of an abdominal exploration and places the artificial anus in the perineum near the original site of the anal canal, a location greatly preferred by a few patients. In the majority of perineal resections we have employed a preliminary colostomy, but in those patients who refuse an abdominal anus and who are very obese, the resection has been done without pre-

liminary operation. In all cancer cases the dissection, whether perineal or abdominoperineal, should be as wide as possible in order to include the condemned adjacent tissues and infected lymphatic channels. Artificial openings, whether in the perineum or on the abdomen, are cared for very satisfactorily and without any great annoyance by patients who are free of disease. The majority carry on their routine occupations without any recognizable handicap.

The results of perineal resections are frequently inferior to those of abdominoperineal resections, other factors being equal. In a series of 120 patients subjected to colostomy and perineal resection, there was an operative mortality of 5 per cent. The majority of these patients received preoperative irradiation. Sixty-one patients were operated upon over five years ago with a five-year survival of 47.5 per cent.

Careful preoperative preparation and postoperative care are essential for good surgical results. All patients should be under observation for at least one week before operation. The colon is thoroughly cleansed, as it is usually in a very toxic condition, by the daily use of saline cathartics and colon irrigations. Preliminary high caloric diets are of value for patients who require building-up, and may be supplied with vitamins, iron, liver, etc. A diet of carbohydrates, sugar, and fruit juices is preferable for a period of five to seven days preceding operation. Patients running elevated temperatures should be carefully investigated as to the cause of the temperature. Oftentimes, it is wise to delay operation for a time because of this factor. Rectal cancer seldom produces an elevated temperature unless the disease is of a highly malignant type or harbors a local abscess. Investigation of the prostate is advisable in elderly males who give a history of nocturia. Examination frequently reveals a prostate that is best treated or removed before operation is undertaken. Fluids are given freely for at least five days, and are supplemented by intravenous injections of glucose for two or three days be-

fore operation Direct blood transfusions of 500 to 700 cc are administered routinely prior to beginning operation

### Postoperative Care

Sedatives are employed freely for the first forty-eight hours Body fluids are restored by hypodermoclysis and intravenous injections of glucose and saline Blood transfusions are used when indicated Male and female patients are catheterized every six to eight hours Frequent catheterization appears preferable to the use of retention catheters The perineal wound should be inspected frequently The irrigation of these wounds, after the seventh postoperative day, adds to the comfort of the patients The value of sulfanilamide and neoprontosil in avoiding fatal infections is still not fully determined Further time will be required to evaluate the usefulness of these drugs in rectal resections

### Radiation Therapy

Radiation therapy has proved to be of value in the treatment of rectal cancer Radium and roentgen rays may be employed as an individual method, or they may be combined with radical surgery Radiation therapy alone is most suitable for the early lesions The earlier the stage of disease, the greater are the possibilities of complete eradication and long-standing clinical cure It is the treatment of choice for many cancers measuring 4 cm or less in diameter In this selective group the results are equal, if not superior, to those of radical resection Medium and large cancers may also be treated by this method but the results are inferior to those obtained in treating tumors of smaller size The chief advantages of successful radiation therapy in the early lesions are (1) that patients avoid surgical operation, (2) they avoid long periods of hospitalization, and (3) they retain a normally functioning rectum Local and constitutional reactions following adequate use of the physical agents in small lesions are practically nil

Radiation therapy, when used alone to provide clinical cure, consists of external

applications of roentgen or radium rays, administered about the pelvis, through six or seven portals of entry Following the external treatments radon is applied either in the form of gold radon seeds implanted into the tumor mass or by surface applications If gold seeds are employed, the total dosage for sterilizing the cancer is administered at one time, while the total dosage of surface applications is given by divided daily dosage technic and extends over a period varying from fifteen to forty days The dosage required for eradication depends upon the size of the mass and the radiosensitivity of the cancer cells

The results of the above treatment in early operable rectal cancers are encouraging Thirty-one patients with tumors of about 4 cm or less in diameter, treated prior to March, 1938, are reviewed Irradiation, in 1 case, was a failure as operation was necessary one year later Five patients are dead Two died with liver metastases, without local recurrence, three and one-half and one and one-half years respectively after treatment Two died, ten and seven and one-half years respectively, after treatment, without recognizable rectal cancer One died, cause of death unknown, one and one-half years after treatment, with no evidence of disease at last visit An elderly woman of 71 years was lost track of after one and one-half years She had no evidence of disease at the time of her last visit The remaining 24 patients are alive and clinically free of disease Fifteen have been well for over three years while 9 have survived periods varying from five to ten years

In advanced operable disease, where surgical results are rarely good, there appears to be a real advantage in combining radiation therapy and radical surgery The preliminary external applications produce a favorable effect upon both the patient and the tumor The symptoms are reduced, the general condition is improved, and the tumor shows a marked decrease of ulceration, reduction in size, and often increased mobility Additional preoperative therapy is at times

advisable in the form of interstitial applications of gold radon seeds, which influence the outlying areas. When radon seeds are employed, operation is carried out seven to fourteen days later. Occasionally a few gold radon seeds are inserted, at the time of operation, into suspected tissue that cannot be removed. When there is a reasonable possibility that malignant cells remain, patients receive additional external therapy after convalescence. These treatments are repeated when thought advisable. While one cannot estimate, in a mathematical fashion, the value of the combined treatment, from clinical experience it would

seem that a higher percentage of clinical cures have been obtained and much greater palliation provided than in those cases where surgery alone was employed.

### Conclusion

Early recognition contributes greatly to successful treatment of rectal cancer. Selective methods are preferable to any routine method in the treatment of this disease. The most radical forms of surgical dissection offer the greatest possibilities to patients in good physical condition. Radiation therapy in the very early lesions is at times the treatment of choice.

## Correspondence

### To the Editor

Looking over the JOURNAL of December 15, 1939, I want to express my full appreciation of pages 2237-38. I have been unable to see the value of *Health News*, it is filled with book reviews (entirely out of place) and idolizing of the "Nurses" and Mr Jones who thinks himself a wonder with his continually so-called idiomatic language. Once in a while he says some sound thing, but it could be much better condensed and expressed. Perhaps page 197 of *Health News*, November 27, 1939, has not struck you as it did me. Namely in "The Nurses of Tomorrow" I would like to know "where does the family physician come in?" I have heard it repeated over and over that the great value of the family physician is to be the "Counsellor of the family." Read it over!

EDMOND E BLAAUW, M D

Buffalo, N Y  
December 20, 1939

### To the Editor

In your editorial, "The Problem of the Arthritic," published in the January 1 issue of the State JOURNAL, you referred to my paper on Gold Therapy but misspelled my name. Kindly have it corrected.

The exact reference is "Gold Therapy in Rheumatoid Arthritis," Sashin, D., Spanbock J., and Kling, D H. Jour Bone & Joint Surg 21 723, 1939.

Very truly yours,

DAVID SASHIN, M D

New York City  
January 5, 1940

The Editors regret this error in spelling and are glad to record the correction.

## NATIONAL CONFERENCE ON MEDICAL SERVICE

The National Conference on Medical Service (formerly the Northwest Regional Conference) will hold its 14th Annual Meeting at the Palmer House, Chicago, February 11, 1940. All state medical societies have been invited to send representatives to the Conference, designed for the exchange of information on progressive medical service activities being conducted throughout the United States, and to discuss problems arising from the distribution of medical service to all classes. The Conference is not official nor political, is not connected with any other organization or committee, and its deliberations result in no resolutions or motions. It is informal, has no dues, bylaws, or formal organizational structure. The Conference has been successful because it

affords an opportunity for physicians who are officially associated with, or personally interested in, medical economics to exchange ideas.

The 1940 program, designed to give sound practical information, includes symposiums on group medical care and group hospitalization programs, the allocation of federal funds to the states, the Washington scene, effective public relations by physicians, and medical welfare programs (including the federal assistance groups, outdoor relief group, and medical and surgical care in hospitals).

Seventeen men, representing as many states in the Union, will be on the program of this one day meeting. It is anticipated that some thirty five states will send representatives to the Conference.

# ACUTE ABDOMINAL CONDITIONS

ROBERT F. BARBER, M D, Brooklyn, New York

(From the Department of Surgery, Long Island College Hospital)

**A**CUTE inflammation within the abdomen is due to a variety of causes. One could list a large number of them and still add little to the understanding of the student unless such causes were correlated.

In starting the discussion it seems best for practical purposes to divide the abdomen into four general parts. The first includes the solid organs—the liver, the spleen, and the pancreas. The second comprises the gut, which includes everything from the cardia to the rectum. The third includes the ducts—the bile passages, pancreatic duct, the oviducts, and the uterus. The fourth comprises the blood vessels, with emphasis on those found in the mesentery.

Where possible, let us now apply trauma, infection, and obstruction to the four physical parts just described, and note the general results.

**Trauma**—A blow on the abdominal wall may produce a rupture of the liver, spleen, gut, or the pregnant uterus. It is well to note that the force of the blow may be so slight that the abdominal skin is not even bruised. Blood vessels are often ruptured by this type of injury. Intra-abdominal hemorrhage follows the rupture of the viscus as a natural sequence. This gives rise to constant pain as the outstanding symptom. In the gut, perforation is followed by hemorrhage, infection, and peritonitis. Penetrating wounds of the abdomen produce injury to the viscera depending upon the site of the injury. Hemorrhage and infection follow as in closed trauma.

**Infection**—The blood vessels and the bile passages of the liver serve as the carriers of infection. In the liver occur the solitary abscess from amebic ulcers of the colon and the milary abscesses from

blood borne bacteria. In the pancreas, from whatever source the infection may come, the final product is acute pancreatitis. In the gut, infection may result in an ulcer. The commonest types are the peptic and the colonic ulcers. The appendix is the most frequent seat of infection. Infection in the liver ducts and gallbladder is a common occurrence, and here we see all degrees of inflammatory changes from acute to chronic. The oviducts and the uterus receive infection from gonorrhea and abortions. In the abdominal vessels infection shows itself most often as a thrombophlebitis. The latter is seen very commonly in the more severe forms of appendicitis in the mesentery of the appendix. When it occurs in the mesentery of the bowel the clinical picture may be most obscure. To summarize for practical purposes, one may say that man's chief abdominal ills come from the appendix, the gallbladder, the peptic ulcer, the Fallopian tubes, and the pancreas. While the initial infection may be local and stay local, it often becomes diffuse. Following the diffuse stage the inflammation may again become localized either in the region of the original focus or elsewhere in the abdomen.

**Obstruction**—Stoppage of the ducts of the liver may be produced by calculi at any point, either intra or extra hepatic, by acute or chronic inflammation of the ducts, by tumors of the walls of the ducts, and finally by tumors pressing from without the walls. Stoppage of the veins of the liver occurs in thrombophlebitis of the radicals of the portal vein. It gives rise to the Zahn infarct. Stoppage of both the bile duct and the pancreatic duct often results from carcinoma of the head of the pancreas. In the gut tract,

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Syracuse, April 25, 1939*

stoppage may arise from without, as from the pressure of the neck of a hernial sac, from tumors lying adjacent to the bowel, and from bands running across the bowel in a constricting manner. Stoppage may come from within the lumen, as seen in pedunculated tumors, or from gallstones. Obstruction of the gut may come from lesions of the wall, as in muscular hypertrophy at the pylorus of infants, or scar formation of the pylorus following ulcer, or carcinoma at the pylorus or any part of the large bowel. Volvulus and intussusception produce stoppage by methods which need no amplification. In the oviduct and uterus, obstruction is caused by the growing fetus. Rupture is common in the oviduct and not uncommon in the uterus itself. Obstruction of the blood vessels gives rise to mesenteric thrombosis, thrombophlebitis, and infarcts.

Although this casual covering of the entire abdominal cavity is reasonably complete, one must add to the picture the acute abdominal history, which often accompanies angina pectoris, or the acute acidosis of diabetes. Slight fever and leukocytosis confuse the physician. The pain is often referred to the upper quadrants. Many a gallbladder has been removed (it may even have contained calculi) during an attack of angina.

The most important symptom for the clinician to consider is pain. The more extensive becomes his experience the more he will be impressed by the fact that pain is the only constant symptom in acute abdominal lesions. For this reason one should study with great care the onset, the character, the duration, and the location of the pain. Trauma, infection, and obstruction will each give rise to many modifications of the pain picture. The clinician will recognize by his experience the finer shades of the story. The pain of inflammation, for instance, is constant but varied in intensity. The pain of trauma or obstruction of the bowel is likely to be regularly irregular, with peaks of intensity which are due to peristalsis. The pain of perforation is very severe and shock producing. The pain of sudden

onset should be associated with tragedy.

Pain is absolutely subjective and for this reason the physician must school himself to interpret pain in terms of the psyche of the individual. Some take pain calmly and entirely without emotion. Some individuals highly sensitive to pain exhaust the superlatives of the English language in describing a moderate discomfort. In the presence of a real pain, symptoms in such persons are difficult to evaluate. Probably the greatest pain is associated with a perforated ulcer, impacted calculi in the biliary passages, and acute pancreatitis. Often the localization of pain will prove disappointing. In the early hours it will center about the navel. At this time the patient will be in such distress as to give little information on the locus of the offending structure. After the early hours have passed the truth may become evident.

The duration of pain is important as it indicates a progressive process, either increasing or diminishing. Sudden subsidence of pain suggests colic or stone. Tenderness holds the second place in importance in symptomatology. By palpation one may elicit the quadrant associated with the greatest inflammatory reaction. Even though there be a generalized inflammatory process this may hold true. The source of the infection will be found in the most tender quadrant.

The sign of Morris (i.e., tenderness on either side of the umbilicus) has proved of considerable value. In the female when the sign is bilateral it often points to pelvic inflammatory disease. But here again, one must remember that a bilateral positive sign is always present in diffuse peritonitis. A right-sided positive sign in the male indicates that we are confronted by a lesion of the gallbladder or the appendix. In a similar condition in the female one must add, as a possible lesion, infection of the right tube or ovary.

Nausea and vomiting are important symptoms because of their frequency. They are not of sufficient consequence to prove of great value in arriving at an opinion. The same may be said of the

white cell count in the blood Here, too, the experienced clinician will not be swayed from his diagnosis by a cell count which is out of harmony with a well-founded impression

In every abdominal calamity the careful clinician will include a pelvic or rectal examination By this means unexpected gynecologic accidents will not be overlooked. One must keep in mind that a ruptured Fallopian tube, torsion of an ovarian cyst, or perforation of the uterus are still common causes of abdominal tragedy

The x-ray is a modern diagnostic aid By this we do not refer to the more elaborate radiologic procedures, but merely to what is known as the flat plate There are at least five useful facts that may be learned from the x-ray film Distention of the large bowel is seen by its location, and of the small bowel by the typical stepladder-like cross markings Fluid, either diffuse or circumscribed, may be detected by the haziness of the gut outline and the loss of muscle markings Free gas in the belly is noted most often just under the right edge of the diaphragm, usually indicative of a ruptured viscus Enlargement of the solid organs is easily noted by their shadows Calcium containing bodies are at once noted Here the gallstone and the renal stone come into view The former may even be detected in the middle of the small intestine as a cause of stoppage.

When one realizes the similarity of the pictures that may be produced in the patient by a great variety of intraabdominal accidents, it becomes mandatory that a practical means be found for clarifying the picture. After all the facts have been gathered pain is still the most important single factor One might say that pain is the only constant symptom Pain is common to so many conditions that are not surgical that even with extensive experience there is a liberal percentage of error in diagnosis The surgeon will often be compelled to proceed on the one symptom of pain as the final arbiter of his action Repeatedly there will be borderline cases which demand a

finer judgment than he is capable of giving even with an extensive experience Here one should be guided by a philosophy which is definite, practical, and founded on experience It may be summed up in that oft-quoted aphorism "in doubtful abdominal cases it is better to go in and be wrong than to stay out and be wrong" Lest anyone should feel that this is advocating a radical attitude in favor of operation, we temper the extreme with another point of view In inflammatory abdominal conditions, which come to the surgeon at a late stage, where the patient's abdomen is greatly distended, where paralysis of the bowel is apparent by the stethoscope, and where the pulse is rapid and the temperature high, we believe that such patients have passed the stage where operation is advisable Under conservative supportive therapy such patients may and do recover, sometimes completely, sometimes with a residuum that needs operative treatment Until such a stage has been reached we consider these desperate cases to be "too late for an early operation and too early for a late operation"

In closing, a few words should be said about the distended abdomen Today we know that the gut becomes paralyzed and powerless to contract because of the volume of gas that it contains Either obstruction or inflammation of itself is not a competent cause of paralysis of the bowel, because, in the presence of either lesion if the gas is removed peristalsis is re-established The principal offending gas is nitrogen, most of which has been swallowed and passed from the stomach into the intestine If this nitrogen can be removed, the patient's condition becomes much improved for any operative procedure. After operation has been performed and distention threatens, the treatment for decompression of the bowel is equally applicable for postoperative cases as it is for preoperative cases

We have managed the distention problem with four tubes

First, the Levine tube inserted through the nose into the stomach. Constant negative pressure by the Wangenstein

method empties the stomach of its gas and liquid contents. A substitute for this first tube is the Miller-Abbott tube which works on a similar principle of decompression. This tube is not limited to the stomach, but passes into the small bowel and, in selective cases, even through the large bowel and out of the anus.

The second tube is the tube inserted into the rectum. Through this, irrigation is instituted by the Harris method. These irrigations are fatiguing and we have found it best to use them intermittently every three or four hours for a period of not more than ten to fifteen minutes. Often large quantities of gas are removed from the bowel by this method.

The third tube is the one inserted into the vein to supply the necessary water, salts, and glucose to the exhausted blood stream.

The fourth tube is the tube which delivers a stream of oxygen to the patient in such percentage as to decompress the distended bowel through the respiratory apparatus. A few years ago such a claim would have been regarded with skepticism, but today, we know from both experimental and practical evidence, that this method of decompression by air supercharged with oxygen has been efficient. From practical experience we do not hesitate to recommend the method.

To cover adequately the diagnoses and treatment of acute abdominal conditions in the space of this talk is impossible. We have attempted to touch lightly upon a few of the highspots of etiology, diagnosis, and treatment. We trust that our conclusions may be of some help to the physician who is confronted with an individual case that tries his judgment.

#### CLASS OF 1900 COLLEGE OF PHYSICIANS AND SURGEONS

The class of 1900 College of Physicians and Surgeons will hold a dinner at the New York Athletic Club on Monday evening, February 12 (Lincoln's birthday), to celebrate the fortieth anniversary of graduation. Not only will members of the class be present but also their sons and near relatives who have taken up the profession.

The notice sent to members urges all to attend, and suggests the slogan "Let life again begin at 40." The president of the class is Henry S. Patterson and the secretary is Theodore J. Abbott. The cost is five dollars and should be mailed to the chairman of the committee, Dr. Edmund P. Fowler, 140 East 54th Street, New York City.

#### ARCH FOE OF YOUTH

Over half the tuberculosis deaths in the United States occur in the age period 15 to 45, the main ages at which the individual is economically most productive and socially important to his family and the community. Tuberculosis strikes down those who are young and those in whom their elders have invested long years of cherishing care. This peculiarity, that it kills in the young adult years, makes tuberculosis a far greater social evil than those illnesses which take lives at later years when family responsibilities are less.

Although tuberculosis is the seventh leading cause of death at all ages, it ranks first in number of deaths from fifteen to forty-five years. In 1937, of the more than 250,000 deaths from all causes in this age group, tuberculosis accounted for 15 per cent, heart disease 11 per cent, pneumonia 9 per cent, cancer 6 per cent, kidney disease 4 per cent, cerebral hemorrhage 2 per cent.

Tuberculosis creates the greatest havoc among those least able to afford prolonged illness and results in a lowered standard of family life. Statistical studies show that the highest tuberculosis rates are found among the lower economic groups. If the patient is a dependent, it means hardship to the parents to bear the heavy expense of prolonged periods of invalidism. The tangible effect is reflected in the fact that there is a curtailment of earning power during the years when under normal conditions this earning power should be greatest. For those in the younger age group it brings about a drastic alteration in the manner of living, as the entire social aspect of life must be abruptly reversed. Preventable tuberculosis deaths among young people are a devastating and unnecessary blow to social morale—Anthony M. Lowell, Assistant Statistician, New York Tuberculosis and Health Association.

# SEROLOGIC TESTS AS AIDS IN THE DIAGNOSIS AND PROGNOSIS OF SYPHILIS

AUGUSTUS B. WADSWORTH, M.D., Albany, New York

(Director, Division of Laboratories and Research, New York State Department of Health, Albany)

IT is largely owing to your interest and support that the practicing physicians have at their command a laboratory service throughout the state, exclusive of the Greater City of New York, that is unique in the extent and standards of work. State and county medical societies have collaborated with the central laboratories in Albany toward developing a system of local approved laboratories for districts of the state that provides service for more than three quarters of the population, exclusive of the Greater City of New York. A policy of decentralization with close collaboration has thus been possible, and, during the past twenty-five years, standards of personnel and service have been advanced so that, in the future, diagnostic tests will be performed only in laboratories under a director who, in addition to graduation in medicine and eligibility for license to practice in the state, has an adequate knowledge of bacteriology and pathology and four years of postgraduate training and experience in these and related medical sciences. This local independent laboratory service supplemented by the central state laboratories, is now serving the physicians of the state far more effectively than would be possible through any expansion of the central state laboratories. The physician at the bedside needs the laboratory close at hand in order that he may give the technical experts complete information in regard to the individual case and receive expert advice concerning the results obtained in any examination. The physician must make his diagnosis in the light of complete information. A laboratory report should not be accepted as a diagnosis. It has always been our policy to submit the actual results obtained. A re-

port of "positive," "doubtful," or "negative" which connotes a diagnosis may be quite misleading.

An approval is now issued for the bacteriologic, serologic, and pathologic examination of specimens. The approval is voluntary, issued at the request of the laboratory on fulfilling the requirements of the Law and Sanitary Code. The local laboratories have formed a New York State Association of Public Health Laboratories which meets twice yearly and through its council offers advice and counsel to the Division of Laboratories and Research as to ways and means of improving the service that is rendered by physicians and health officials.

The foregoing outline of the system and principles of policy and procedure is a necessary introduction to any consideration of the branch of the service that I wish to present to you in particular—namely, the serologic tests for syphilis. Although serologic tests are based upon the reactions of immunity in the tissues, their diagnostic significance is only in varying degree specific depending upon the character and scope of the test. The significance of the results must depend upon the clinical information available in each individual case. The serologic tests in gonorrhea are so far from specific in their present stage of development as to be unreliable or misleading unless interpreted in the light of the clinical history and diagnosis. The serologic test of agglutination for typhoid fever, as you all well know, is specific only when the degree of the reaction, the titer, is taken into consideration and the history, character of the present illness, or previous vaccination are known. The specific reactions underlying the serologic tests for syphilis

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 26, 1939*



are not known and it is remarkable that the two tests—complement fixation, on the one hand, and, on the other, precipitation—are as specific as practical experience with them during the past twenty years appears to have established. Both forms of tests require the most careful standardization or adjustment of the reagents in order to safeguard against error.

Optimal proportions must be observed throughout in order to obtain accurate results. The early tests were those of complement fixation, and this method continues to be capable of the most accurate and sensitive adjustment, although the precipitation tests, when accurately standardized, now approximate it closely and, for reasons of expediency, in many laboratories have supplanted it. But serologists in general do not consider it safe to rely upon a single precipitation test and many, in actual practice, use several of them.

From the beginning, approval in New York State has been limited to complement fixation. There has never been any restriction as to what additional tests might be used in the local laboratories. This standard has been justified by the practical results that have been obtained in the central and local laboratories during the past twenty years. Moreover, it has provided a sound basis for the comparison of different methods and for the improvement in the serologic aids to the diagnosis of syphilis. Finally, it has led to the recent important development of a quantitative method of titrating the specific activity of the serums which is only at present practicable by a method of complement fixation. The quantitative methods have been under investigation for a number of years at the central laboratory and are practical adaptations of complicated procedures that were developed to determine the antigenic action of the lipides—cephalin, lecithin, and cholesterol. The present quantitative method has now been used two years by the central laboratory. Recently it has also been adopted in two of the local laboratories with satisfactory results.

Directors of six additional laboratories are arranging to do the work.

In 1927, six laboratories collaborated in a comparative series, reporting the results with the approved complement fixation methods and also additional precipitation methods that they had done in comparison with the complement fixation. The fact that complement fixation provides the most accurate and reliable method as compared with precipitation is clearly supported by the results of this series in 1927. In a recent comparative series, twenty-three of the approved laboratories have just submitted the results of their tests and, in this series also, the fact that complement fixation is capable of the most accurate and reliable standardization is supported by these results, but the difference in the two methods appears to be less today than twelve years ago.

The progress that has been made is reflected in the reports of Dr. Ruth Gilbert who has served as referee on the Serologic Tests for Syphilis for the Laboratory Section of the American Public Health Association for the past sixteen years. The practical studies and the research in the central laboratory have been maintained in close touch throughout the development of this work.

During the past twenty years knowledge of serology in syphilis as in other diseases has advanced materially. This is very strikingly illustrated by the results of comparative series of tests in this country and abroad. The evaluation of a comparative series of serologic tests should be based on fundamentally sound serologic principles. No serologic test has 100-per cent specificity. Claims for 100-per cent specificity are only misleading. The accuracy of any evaluation is limited by the accuracy of the data upon which it is based and any abridgments of the fundamental information, as the use of broad classifications, may sacrifice a part of this accuracy. This appears to be considerable when the results of serologic tests are reported "positive," "doubtful," or "negative" as prescribed by the United States Public Health Service in its study of comparative tests, especially since no

generally accepted basis exists for the classification. From the standpoint of aids to the clinician in diagnosis, the zone of the doubtful reaction may be conservatively broad or so narrow as to have no significance and to be definitely misleading. The doubtful zone is possibly the most important in any analysis of the practical value of serologic tests. Yet it has been neglected in the evaluation of these Federal series. Under these conditions, ratings based upon 100-per cent specificity and percentage of "positive" reports are not only open to serious criticism but reflect on the relative efficiency of the so-designated "control tests"—those of Kolmer, Kahn, Kline, and Hinton—which should be considered in relation to present-day standards of serology and in the light of what is possible. Not all serums from patients with a syphilitic infection react, and reactions may occur when no evidence of syphilis can be found. Finally, in rating percentages of specificity or sensitivity, apparently no account has been taken of the positive reports by the "control" laboratories on specimens of very slight activity or of negative reports on the serums of well-marked activity from cases of syphilis that had little or no treatment. If such a system of rating reflects on the "control tests," it may also reflect on or obscure the record obtained by some of the other laboratories.

Personally, I have reviewed only the results reported by the "control" laboratories, but it is obvious that the consensus of evidence in these reports indicates approximately—excluding instances of prozone effects—the true result, not necessarily from the standpoint of diagnosing syphilis but of what could reasonably be expected of a serologic test in the present stage of our knowledge. The consensus of these reports also corresponds with the clinical data. No marked discrepancies occurred with all of the tests but no single test was free from them, and the tests which had the highest percentages of sensitivity, namely, positive results with specimens from syphilitic cases—those of Kline and Hinton—had also the greatest

number of marked discrepancies. The results reported by Eagle in the 1938 series varied to an even greater extent. It is only by comparison with the results of the quantitative titration of the activity of the serums that further analyses, such as have been reported by Mrs. Maltaner,<sup>1</sup> associate referee with Dr. Gilbert, can be made of these discrepancies. That they are in the nature of prozone effects is suggested by the similarity of the reports, together with the clinical data, but comparison with the titers of the serums affords convincing proof.

The new quantitative test has been in practical operation in the central laboratory in Albany since April, 1937. Experience during the past two years has established it as a practical method—so far as we are able to ascertain, more accurate and reliable than previous methods. Moreover, it provides a sound scientific basis for further advances not only in the technic of determining the titer but also in evaluating the sensitivity and specificity of the antigens. In conformity with our policy of reporting the actual results of laboratory tests to the physician, the titers to one decimal have been reported. Obviously, the fractions on higher titers are of little or no significance and may connote a greater degree of precision than can be obtained with the technic at present, but they are important with the very low titers, because they are within the limits of the average technical variation. In the vast majority of cases the discrepancy between duplicate determinations is less than 25 per cent and is usually less than 8 per cent. Further study, now that an accurate technic of quantitation is available, should establish more accurate methods of preparing and standardizing the reagents, since it is possible to determine the factors that give rise to variation in the exceptional instances that have always occurred in both forms of test—complement fixation and precipitation. The activity of the serum in the course of infectious disease is well known to fluctuate, and this fact must be taken into account in evaluating the significance of any series of tests made at intervals in

the course of the disease or in studying the effect of treatment. Experience with the quantitative determination of activity in tuberculosis, for example, indicates that, in general, the fluctuation in titer corresponds to the activity of the tuberculous process, whether or not this is also true in syphilis may be determined, as information with the new test is obtained with further study of this disease. Despite the variation, it should be of definite practical value to the physician in both diagnosis and prognosis. An individual report is obviously not of much prognostic significance, but with repeated tests, the titers, in general, must be indicative of increase or decrease in the activity of the serums under treatment or in the course of the disease. For example, the fall in titer of early cases under treatment is prompt and marked in comparison with that of late cases of the disease, in which the infection has become established. Possibly it is the most reliable indication of the results of treatment and thus of prognosis. Certainly it is one of the most reliable signs of improvement in the condition of the patient. Certain syphilologists contend that a titration of the activity in the patient's serum is not of practical importance, but these syphilologists proceed with treatment by prescribed formulas which, by and large, in the majority of cases have proved effective or safe. But this does not apply to careful clinical analysis of the treatment of the individual case, and it is difficult to believe that even experienced syphilologists might not find information concerning the changes in the activity of the individual patient's serum of practical value.

With these trends, it seems to me that the great opportunity for private practice in comparison with regimented, prescribed formulas lies in taking advantage of all the refinements that medical science has developed as aids to the practice of medicine. Certainly, if one turns to the patient's chart of a modern practitioner, one finds recorded in detail the data indicating the changes that are taking place in the tissues during the course of the disease and under treatment.

I am convinced that physicians will find in these recent advances in the serologic test for syphilis definite practical aids to diagnosis and prognosis, and that, as experience with the new methods accumulates, it will clarify and stress the fact we all know but so often forget, namely, that the diagnosis should not be made in the laboratory but by the physician in the light of his clinical knowledge of the individual case.

## Reference

1. Maltaner Elizabeth. *Am J Pub Health* 29: 104-112 (1939)

## Discussion

Dr Girsch D Astrachan, *New York City*—Any procedure or new technic which may help to clarify various problems in the field of serology, diminish the number of errors, remove different uncertainties of the diagnostic significance of various tests, should be welcomed by every clinician who deals with practical questions of the diagnosis and prognosis of syphilis.

The new method described by Dr Wadsworth gives us a quantitative evaluation of the specific activities of the patient's serum. This titration with its more accurate determination of the changes in the serum reagin content may be of great practical value.

1. Cases of conflicting serologic reports or cases with doubtful reactions may constitute a perplexing problem for the clinician. If the history is negative, the tests have to be repeated several times and in various laboratories. Sending the blood to several laboratories and receiving many answers, often conflicting, may increase the confusion and multiply the difficulties of interpretation. In such cases a quantitative method may be of great help.

2. Serology of the newborn. It takes several weeks and sometimes even longer, with the routine serologic procedures, to make a definite diagnosis on the newborn. The quantitative method, performed at weekly intervals, may help to establish or refute the diagnosis of congenital syphilis in the newborn, in a much shorter period of time, by showing a gradual increase or decrease in the titer.

3. The gradual increase of the titer, shown by frequent tests, may also be of considerable value in the diagnosis of some cases of primary syphilis.

*Efficacy of Therapy*—We know of several types of syphilis in which a biologic or complete cure is possible. The large majority of early

cases, and a smaller number of early latent, and early congenital cases belong to this group. The efficacy of the treatment can be measured mostly by prompt changes in the blood serology.

If the tests are done by the routine method, nothing is known of the gradual response of the serology until the positive reaction changes to doubtful or negative, and this generally takes at least eight to ten weeks, and often much longer. With the quantitative method, however, we may determine the effectiveness of the therapy on the serology a few weeks after the institution of treatment.

**Wassermann-fast Cases**—The cause of seroresistance is not established yet, and while some believe it is due to persistent foci of spirochetes and progression of the disease, others consider it only a manifestation of persistent immunity. When discussing the prognosis of these cases, we have to consider the duration of the disease, the age, and the sex of the patient.

The seroresistance in a case of an elderly man with a history of infection of twenty to thirty years' duration, is of little significance. On the other hand, a young man with an early or early latent syphilis with a resistant serology presents a more serious problem. He may develop recurrences and other signs of progression of the syphilitic infection. A woman with latent syphilis may give birth to congenitally syphilitic children. Treatment, especially during pregnancy, is of paramount importance. The quantitative method by revealing even the slightest changes in the serology will be of great value to us in showing the efficacy of treatment in seroresistant cases. I would also like to say a few words about the so-called nonspecific serologic reactions. Cases of false positive and false doubtful reactions are found in serums of tuberculous donors (6 per cent). Fifty-three cases of nonspecific Wassermann and Kahn reactions in cases of pneumonia, bronchitis, herpes, tonsillitis are reported by Krag and Lonberg. These reactions may be quite misleading and may lead to the erroneous diagnosis of early syphilis. I observed 11 cases of nonspecific weakly positive Wassermann and Kahn reactions among pregnant women. I would like to hear from Dr Wadsworth about the problem of nonspecific reactions and the possible way of clarifying this question.

Dr Ernest Witebsky, *Buffalo, New York*—I believe that the expression "quantitative titration" would require some further definition and explanation. So far, the titer of the serum is defined as the smallest amount of serum (or the highest dilution) that would give a certain reaction under certain experimental conditions. In the investigations of Dr Wadsworth and his associates, however, the amount of complement used rather than the titer of the serum under investigation is determined. In the field of precipitation tests a somewhat similar but by no means identical procedure was tried by Vernes. This French author, whose reaction is used on a large scale in France, determines by means of a nephelometer the strength of the reaction according to the degree of cloudiness obtained.

Inasmuch as the main importance of the Wassermann test is considered to be a diagnostic one, the quantitative titration of the serum in positive cases is somewhat neglected. In the case of examination of spinal fluid, however, the quantitative titration is considered of value for differential diagnostic purposes. Positive reactions are obtained in higher dilutions of spinal fluid from patients with general paresis rather than in tabes, where the antibody titer is usually very low. I feel, therefore, that especially for the examination of spinal fluid the elaborate methods developed by Dr Wadsworth and Dr and Mrs Maltaner will prove to be very significant. The best thing to do, however, for diagnostic purposes, I believe, is to combine complement fixation tests as well as precipitation tests. Even when the best methods available today are used, contradictory results are not infrequently encountered. The constant occurrence of those discrepancies require cautious interpretation on the part of the clinician and should not be considered negligible, especially as far as the diagnostic phase is concerned. While I consider it rather difficult to rely on complement fixation tests alone, or on precipitation tests alone, I feel that the new method introduced by Dr Wadsworth represents an important step forward in the development of serologic technique. The relatively constant values obtained by that method is really amazing to everybody engaged in serologic work. I am sure, therefore, that the new method developed in Albany will prove to be very useful not only for the serodiagnosis of syphilis, but for the serodiagnosis of tuberculosis and gonorrhea.

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"Poor Danny! He died from drinking shellac"  
At least he had a fine finish"—*Columns*

Music's the medicine of the mind—*John Logan*

# THE ROLE OF THE ENDOCRINES IN DERMATOLOGY

JOSEPH JORDAN ELLER, M D , and LLOYD H KBST, M D , New York City

CERTAIN dermatoses have been proved to be associated with glandular dysfunction. In some, the endocrines may play a part in association with other etiologic factors. There is another group of dermatoses whose etiology has not been proved but is believed to be due to some endocrine disturbance. The relationship of the hormones to the vegetative nervous system and the vitamins is now recognized. Murlin states<sup>1</sup> "We are able to demonstrate startling similarities, not only between the various hormones themselves, but also between hormones and vitamins, structurally and functionally." Furthermore, it has been shown recently that the adrenal cortex is the main storage organ of vitamin C.

It is difficult at times to determine which gland is the center of a primary disturbance and which is secondary. No one gland acts independently. They are all woven into a complex interrelationship. Thus we may observe a polyglandular etiology in many diseases. It must also be recognized that the improvement observed with the use of a glandular extract does not prove the etiology of that disease. The effect may not be due to specific substitution therapy, but rather to the action of the drug.

*Pineal Gland*—The pineal gland has not as yet been assigned a recognized function.<sup>2</sup> In dermatology there is no definitely known cutaneous disturbance which results from its dysfunction, excepting possibly certain pineal tumors which are associated with hypertrichosis.

*Pituitary Gland*—The pituitary gland has a very complex structure and its proved interrelationship with other glands makes it difficult to isolate as the sole or primary offender in a particular disease. Almost everyone of the endocrine glands has been mentioned in association with

scleroderma. Posterior lobe dysfunction may be a factor in this disease, as evidenced by Oliver and Lerman<sup>3</sup> in their paper summarizing the improvement observed in 20 patients with scleroderma (morphea, linear, and diffuse types). They state, however, that this is probably due to the effect of the solution on the peripheral circulation rather than to any substitution effect. Exanthemas, gingivitis and stomatitis, and xanthomatoses occurring in Schuller-Christian's disease have been observed in persons manifesting a posterior pituitary dysfunction. There is no cutaneous disease proved to be the result of hyperfunction of the posterior pituitary.

Sevringhaus<sup>2</sup> states that "A pigment controlling material has been found in animals, probably related to the intermediate rather than to the posterior pituitary lobe and has no demonstrated significance in human physiology." Recent observers<sup>4</sup> believe that the pituitary gland may be the source of pigmentary alterations. A chromatophore substance has been found in the pars intermedia, posterior lobe, and adjacent areas in the wall of the third ventricle which stimulates the pigment bearing cells of cold blooded animals. The authors suggest that a similar hormone is elaborated by the human pituitary, which exercises a similar effect on skin pigment.

*Anterior Pituitary*—In acne vulgaris the consensus is that endocrine dysfunction, particularly of the anterior pituitary and gonadal glands, plays a leading role in the etiology and at times may be the sole cause of this condition. McCarthy and Hunter<sup>5</sup> noted a complete absence of estrogenic substances in the urine of many patients with acne during various phases of the menstrual cycle. They also noted a deficiency in the production of

estrogenic substance in the blood of menstruating normal women who had an accompanying acne. They concluded that a deficiency secretion of the follicle ripening hormone may be the direct or indirect cause of one type of acne. However, treatment with gonadotropic and estrogenic substances proved without benefit in these cases. Coincidental with this they also came to the conclusion that thyroid dysfunction rarely shows any relation to acne. Alopecia prematura and hypertrichosis have been reported associated not only with pituitary dysfunction, but also with most every other gland. Results of treatment have varied and although most observers believe it has a definite endocrine relationship, there may be other factors associated with it, especially the sympathetic nervous system.

In any severe hypofunctional state of the anterior pituitary lobe such as in Simmond's disease, marked skin alterations are a distinct feature. The skin is coarse in texture. Due to lack of nutrition, the sweat and sebaceous glands may become atrophied, the result being lack of perspiration and especially loss of hair. Destructive nail changes may also be a feature. Rosenthal<sup>6</sup> showed evidence of disordered pituitary function in one of his cases of striae atrophicae cutis. In Cushing's basophilic hyperpituitarism, the purplish lineae atrophicae, hirsutism, and a dry plethoric skin are seen, and in acromegaly, a diffuse thickening of the skin and a tendency to hypertrichosis and hyperpigmentation. Fibromas are sometimes seen. In all of these conditions, endocrine dysfunction is a proved factor in the etiology, and the associated cutaneous manifestations must be considered the same. It is noted<sup>6</sup> that striae in young adolescents with obesity which lessens or disappears with maturity is probably due to a temporary endocrine upset.

Dermatologic manifestations associated with thyroid dysfunction are vague in many instances. However, in myxedema, the result of insufficient hormone production, there is present a dropsy-like swelling of the skin which is coarse, dry, and rough. There is a falling out of the hair

on the scalp and outer portion of the eyebrows (Hertoghe's sign) with a sparsity on other parts. A ribbon-like alopecia on the forehead and on the nape of the neck is considered to be characteristic. The nails are brittle, thin, and striated. Bat wing freckling is frequently seen on the face of cretins. This may indicate an associated involvement of the pituitary gland. In thyrotoxicosis, all the metabolic processes are increased resulting in skin manifestations and disturbances of hair and nails. The skin is thin, warm, and moist and may show pigmentation and dermatographism. Simple erythemas may occur. In scleroderma, postmortem findings sometimes show atrophy of the thyroid which explains the improvement, in some cases, from thyroid therapy. Pardo-Castello<sup>7</sup> reported two cases of atrophy of the nails of the hands and feet. Smith<sup>8</sup> states that Lurthlen observed that in animals deprived of the thyroid gland, all healing processes in the skin are retarded, and furthermore, the derma in such animals responds to slight irritation by the formation of scars and keloids.

*Parathyroid Gland*—The parathyroid gland regulates the amount of phosphorus and calcium in the blood, the excretion of these elements, and their deposition in or mobilization from certain tissues. The hormones share this responsibility with vitamin D.<sup>2</sup> In an interesting article based on the theory of keloid formation being caused by hypersecretion of parathyroid, Biberstein<sup>9</sup> injected overdoses of parathyroid hormones into animals and showed a definite proliferation of connective tissue, so that muscle bundles disappeared at the site of injection and were replaced by firm infiltrations which remained and even spread after injections were stopped. Favorable reports have been noted by many authors<sup>10 11 12</sup> with parathyroidectomy and parathyroid therapy in cases of scleroderma. Wolf states that the parathyroid hyperactivity is the initiating factor, osteolysis the intermediary step, and scleroderma the final result. R. Lenche, *et al.*,<sup>13</sup> report a case of experimental production of a scleroderma condition in a rat with fragments

of cystic adenoma of the breast from a patient with scleroderma Cornbleet<sup>14</sup> used parathyroid extract subcutaneously in 21 cases of lichen urticatus with improvement in almost all of them Pillsbury and Sternberg<sup>15</sup> have observed similar results Wigser<sup>16</sup> used parathyroid therapy with beneficial results in a case of urticaria of undetermined origin

Impetigo herpetiformis has been considered to be an endocrine disorder associated mostly with the parathyroid<sup>17</sup> G Scherber<sup>18</sup> has reported good results with parathyroid therapy in this condition as well as in psoriasis vulgaris pustulosa Plá and Martinez<sup>19</sup> reported 2 cases of vitiligo improved by parathyroidectomy or ligation of the thyroid artery Rados and Rosenberg<sup>20</sup> state that there is a relation between blue sclera and hyperparathyroidism Calcinosis cutis and alopecia prematura have often been reported associated with parathyroid dysfunction

The *thymus* is only mentioned to state that up to the present, association with dermatologic conditions has not been proved It has been noted, however, that an individual with a hypertrophied thymus gland may have a transparent skin and silky hair In Timme's syndrome the skin is velvety and there is little or no hair Many years ago some authors thought that the thymus might have a relationship to psoriasis, but this was never corroborated

The cortex of the *adrenal* is known to be dependent upon the pituitary for its integrity Whether the cortex and medulla are functionally connected is only speculative The cutaneous pigmentation of Addison's disease, usually of the exposed parts, is known to be a definite part of cortical hypofunction The pigmentation also appears on the mucous membranes Pigmentation of the nails and fenestrations has been reported in this condition Certain adrenal cortex tumors alone or together with pituitary dysfunction may be an etiologic factor in Cushing's syndrome In cortical hyperfunction, hypertrichosis may be extremely marked on the entire body including the

dorsum of the feet The hyperpigmentation frequently seen in the diffuse type of scleroderma has been used as an argument that adrenal changes are a cause of the disease Hypertrichosis and many pigmentary disturbances are often associated with adrenal dysfunction, i e, the blanching of the skin in Froelich's syndrome and its darkening in acromegaly are usually considered to be due to associated adrenal changes Goldzieher states that the old women's beard with its coarse, black, scattered hair on the upper lip and on the chin is pathognomonic of cortical hyperfunction Allergy may result from cortical insufficiency as large quantities of vitamin C are stored in the cortex

*Pancreas*—The pancreas is a factor to be considered in cutaneous dermatoses There is a tendency for the prevalence of dermatophytosis on the feet of diabetic patients, probably the result of a hyperglycemia with the production of excellent media on which fungi and bacteria may grow Also associated with pancreatic insufficiency are furuncles and carbuncles and occasionally gangrene of the extremities Necrobiosis lipoidica diabetorum is usually associated with diabetics although it has been observed in nondiabetics Xanthochromia, a yellowish discoloration of the skin, is sometimes seen

Menstrual disturbances with their cutaneous manifestations, pigmentations of pregnancy (chloasma, linea alba, the perimamillary areas, vulva), herpes gestationis, alopecia prematura, alopecia areata, impetigo herpetiformis, hypertrichosis, and abnormal secretion of sweat and sebum are associated with dysfunction of the gonadal glands It is interesting to note that chloasma may occur in virgins as well as males In hypogonadism the skin may become wrinkled and appear as a brownish coloration Long, coarse hairs on the face occur in old age (geroderma) Herpes is often seen in association with menstruation and pregnancy Thaddea<sup>21</sup> reports a case of Addison's disease complicating pregnancy and cites the relation of the suprarenal cortex to the gonads Kraurosis vulvae and semile vaginitis have been reported improved by

injections of estrogenic hormones. Physiologic experiments show that estrin has a marked action on skin and in particular on skin and mucous membranes of the genitalia, where it causes an increased growth of squamous cells and hyperemia of the deeper tissues. Foss<sup>22</sup> states that of 8 actual cases of kraurosis vulvae all the patients who attended regularly and received adequate dosage were benefited. Davis<sup>23</sup> made stained biopsy specimens in cases of senile vaginitis before and after estrogenic therapy and so demonstrated that during six to eight weeks the atrophic epithelium had reverted to the normal state associated with active sexual life. Peters and Macheth<sup>24</sup> state "It is interesting that the most satisfactory method of treatment has been the combination of intravaginal and intramuscular therapy." The intravaginal therapy followed the observation of many biologists that certain harmonic effects are more easily obtained by local application of the hormone in a form which can be absorbed by the epithelium than by its parental injection. Dermatitis dysmenorrhoeica may be associated with or be independent of the periods.

Andrews<sup>25</sup> states that an observation of the eunuchs, if correct, suggests that the factor for baldness may ordinarily be effective only in the presence of the testes and that the gonads certainly have an etiologic importance. Goldzieher is of the opinion that baldness never occurs in the eunuch or in the eunuchoid type.

Erythrocyanosis cutis symmetrica is considered an endocrine disturbance in which the skin changes are brought about by exposure to cold.

In their case of acanthosis nigricans, Grace and Schwartz<sup>26</sup> were unable to discover any definite evidence of endocrine disturbance and hold the hypothesis of endocrine dysfunction as an etiologic agent in acanthosis nigricans as unfounded.

It is recognized that tinea of the scalp after puberty is not common and that many cases have the tendency to clear up at puberty without therapy. The relation of allergy of the skin to the endocrines

and vitamins is a field in which much recent work has been done. The adrenal cortex is an important aid in the regulation of mineral metabolism and appears to be one of the factors responsible for allergy. In the later stages of hyperthyroidism where much of the calcium has been lost many allergic manifestations are observed.

Treatment will be mentioned here only to state that it is not without danger.<sup>27</sup> Many have reported untoward systemic and possibly local effects following topical applications of estrogenic hormones. They state that it has been proved such hormone absorption topically or parenterally can induce proliferation in the tissues, particularly in the genital tract, which in animals has resulted in the development of cancer. Zondek<sup>28</sup> has also shown that cutaneous applications of follicular hormones can be absorbed through the skin and produce marked systemic effects.

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# THE SPARING EFFECT IN POLIOMYELITIS\*

GILBERT DALLDORF, M D , Valhalla, New York

(From the Laboratories of Grasslands Hospital, Valhalla)

THE biologic phenomena of vaccination and the use of immune serum have so far failed to provide means of preventing or treating poliomyelitis and the search has been extended to less orthodox means. Thus the experimental disease can be effectively prevented by nasal sprays. This method is well known and has been widely used. It is not commonly known that even after poliomyelitis is induced in monkeys it can be greatly modified. This may be done by infecting the animals with another disease, lymphocytic choriomeningitis. While such a method does not seem adaptable to the clinical treatment of poliomyelitis it deserves study and consideration for the light it may throw on poliomyelitis in particular and the virus diseases in general.

Before describing the effect of combination of the two diseases it will be useful to mention their characteristics. The poliomyelitis virus used throughout these experiments is known as MV (mixed virus), a pool of viruses derived from various human cases. It has been used in many laboratories over a long period and is thoroughly adjusted to the monkey. The intracerebral inoculation of 0.2 cc. of a 10 per cent suspension of pooled cord samples produces, as a rule, a uniform, fatal disease. The response is characterized by an incubation period of three days, followed by high fever and prostration within 72-96 hours. Death soon follows.

Lymphocytic choriomeningitis virus produces a much more varied, though usually less violent response. During our early experiments using virus from dog and ferret sources, the disease was benign, with few fatalities. The incubation

period is several days, followed by two weeks of fever of a typhoidal character subsiding slowly and often followed by subnormal temperatures. Virus that has been maintained by monkey passage produces a similar response except that the febrile period often terminates earlier by rapid lysis accompanied by extreme weakness, emaciation, and death. In our experience the mortality of uncomplicated lymphocytic choriomeningitis in the monkey has varied from 9 to 84 per cent depending on the source of virus and other factors.

The combination of these two diseases markedly modifies the outcome of the poliomyelitis. This we have called the "sparing effect" to distinguish it from other immunologic mechanisms. The features of the "sparing effect" are as follows:

1. *Time* is the most significant factor in determining the effect of lymphocytic choriomeningitis on poliomyelitis. This is shown by Table 1 in which a number of experiments have been collected. Thus, of 16 monkeys which from four to thirteen days previously were injected with lymphocytic choriomeningitis virus, 11, or 70 per cent, recovered from poliomyelitis. The mortality among the poliomyelitis controls was 100 per cent. If the lymphocytic choriomeningitis was given twenty-four to seventy-two hours before the poliomyelitis, but 50 per cent survived and if it was withheld until after the poliomyelitis appeared, only 30 per cent recovered. The stage of choriomeningitis in which the poliomyelitis is given therefore plays a determining role in the results.

2. The mechanism is not a matter of cross protection. Thus, also incorporated in Table 1 are the results in 4 mon-

\* Aided by a grant from the National Foundation for Infantile Paralysis.

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not exclusive of a quantitative difference in the immunologic responses, they suggest that the combination exerts no considerable effect.

6 The question naturally arises whether the action is mutual in that the poliomyelitis modifies the choriomeningitis as well as the reverse. There was no indication of this in the original experiments but at that time the choriomeningitis was relatively benign and the best yardstick of such an effect, the mortality rate, was lacking. In more recent experiments, in which the choriomeningitis alone produced a mortality rate of 83 per cent and the mortality rate among the poliomyelitis controls was 78 per cent, the mortality rate among various groups of the combination animals was 30, 42, and 50 per cent. In other words, there was some evidence that the effect was mutual, that the combination of the two diseases lessened the severity of each.

7 You will have noticed that mortality and not paralysis has been the criterion used in the tables. This has been done because of the nature of the disease in monkeys. In the present work the control animals with but rare exceptions have either developed a severe, rapidly fatal form of poliomyelitis or have been cases of "missed infection." In the experimental groups with high survival rates, many animals have recovered with paralysis of one or more extremities. All of these which we have been able to follow for several months have completely recovered function in their paralyzed limbs. Neither the experience of others nor our own controls make possible a comparison of these results with the behavior of monkeys not infected with choriomeningitis. The observation is made both to indicate the differences between the experimental and spontaneous disease and the difficulties in measuring the effects of treatment.

8 The "sparing effect," as I have described it,<sup>1</sup> is not an isolated observation. A similar effect of vaccination on whooping cough was described by John Archer in 1809.<sup>2</sup> In more recent times

a similar phenomenon has been rather extensively studied in potato virus.<sup>3</sup> Hoskins,<sup>4</sup> in 1935, reported experiments quite similar to ours. Hoskins, however, used different strains of the same virus, that of yellow fever. At the most favorable interval 18 of 23 monkeys survived while later only 9 of 25 survived. These experiments have been confirmed and extended by Findlay and MacCallum<sup>5</sup> who demonstrated that Rift Valley fever likewise exerts a "sparing effect" on yellow fever. Various other references to a like phenomenon may be found, most of a casual nature.

It seems evident, therefore, that in the "sparing effect" we have an effective immunologic mechanism. Its virtue is that it is effective under conditions in which other means are useless. Its weakness is that it requires the use of a second pathogenic agent. Whether there are possibilities for good in this mechanism only time can tell.

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## Discussion

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(1) As a result of their early experiments they felt justified in concluding that the infection caused with virus of canine distemper had a sparing effect upon poliomyelitis in the experimental animal. Later they reported (November, 1938) that certain lots of their canine distemper virus were contaminated with the virus of lymphocytic choriomeningitis and further reported that the sparing effect in poliomyelitis seemed to be due to the latter virus.

(2) Today they have demonstrated more completely that the virus of lymphocytic choriomeningitis when injected into the experimental animal with a proper time relationship does ap-

TABLE 1—INFLUENCE OF TIME ON THE SPARING EFFECT

Time at Which the Lymphocytic Choriomeningitis Was Given	Number of Monkeys	Recovered	Results	Died
Three to five months before poliomyelitis	4	0		4
One month before poliomyelitis	2	0		2*
Twenty days before poliomyelitis	2	1		1
Four to thirteen days before poliomyelitis	16	11 (70 per cent)		5 (30 per cent)
One to three days before poliomyelitis	8	4 (50 per cent)		4 (50 per cent)
During the incubation period of poliomyelitis	10	3 (30 per cent)		7 (70 per cent)

Poliomyelitis controls for first two groups had a mortality rate of 100 per cent. Controls of last three groups had mortality rates of 87 to 100 per cent.

\* Sacrificed on 30th day when condition seemed hopeless. Controls of this group all died in from five to fourteen days. Sparing effect believed present.

keys which had had lymphocytic choriomeningitis three to five months before poliomyelitis. All of these succumbed to poliomyelitis in typical fashion. Likewise immune serums have been found to exert no protective effect against poliomyelitis.

3 The response is not due to fever. Thus, of the 2 monkeys injected with poliomyelitis virus twenty days after choriomeningitis both were afebrile at the time of the second inoculation yet the "sparing effect" was distinctly present. In both animals the poliomyelitis was modified and one recovered. Various similar examples have been observed. Furthermore, the fever in the animals that recover is commonly less severe than in those that succumb, and characteristically is less severe than in uncomplicated poliomyelitis itself. It is, however, true that the period of greatest effectiveness roughly corresponds to the febrile period of lymphocytic choriomeningitis but this is probably true simply because the febrile response reflects the natural evolution of the disease.

4 The "sparing effect" is present during systemic infection. It is not, in the experiments included in the present discussion, a local effect but a general one. This is indicated by the fact that the two viruses may be given by dissimilar routes

TABLE 2—RESULTS OF REINOCULATING MONKEYS WHICH HAD RECOVERED FROM SPARING-EFFECT EXPERIMENTS WITH POLIOMYELITIS VIRUS

Number	Results of Original Experiment	Result of Reinoculation	Resistant	Susceptible
4	No paralysis	0	4	0
4	Paralysis	4	0	4
1	No paralysis			1*

\* Recovered with paralysis. During original experiment had transient weakness of one leg.

and at sites distant to one another without modifying the results. This statement may not apply to intranasal infection.

5 The combination does not appreciably interfere with the independent immunologic responses to the two diseases. Neither does it heighten the response so far as the present evidence shows. Monkeys convalescent from combined infection are immune or susceptible to reinfection with poliomyelitis depending on whether or not their original attack was paralyzing. This is shown by Table 2. This is precisely what happens when recovered poliomyelitis controls are re-injected. Furthermore, monkeys that have experienced both diseases simultaneously develop an immunity to choriomeningitis as do choriomeningitis controls. After two months they are fully immune. Virus neutralizing antibodies are present in the serums of such convalescents (Table 3). While these results are

TABLE 3—IMMUNITY TO REINOCULATION AND PRESENCE OF SERUM NEUTRALIZING ANTIBODIES IN MONKEYS CONValescent FROM COMBINED INFECTION WITH POLIOMYELITIS AND LYMPHOCYTIC CHORIOMENINGITIS

Animal	Previous Experience	Result of Reinoculation	Neutralizing Antibodies		
			10-1	10-2	10-3
1	Polio-chorio with recovery	Immune	S	S	S
2	Polio-chorio with recovery	Immune	S	S	S
3	Contact chorio	Immune	S	S	S
4	Chorio control with recovery	Immune	S	S	S
5	Normal monkey Neg control serum		12	10	20
6	Normal monkey Neg control serum		10	10	10

(Reinoculation, with virus of lymphocytic choriomeningitis positive in control monkeys. 0.5 cc of a 10 per cent suspension of guinea pig brain given subcutaneously, 10-1, 10-2, 10-3 indicates the dilution of a similar virus source which was mixed with the serum to be tested in equal amounts and injected subcutaneously into guinea pigs. S indicates the guinea pigs surviving. The numerals indicate the day on which the pigs died.)

not exclusive of a quantitative difference in the immunologic responses, they suggest that the combination exerts no considerable effect.

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(2) Today they have demonstrated more completely that the virus of lymphocytic chorionmeningitis when injected into the experimental animal with a proper time relationship does ap-

parently induce modification of the disease poliomyelitis in the experimental animal. At this time I would like to congratulate Doctor Dalldorf upon his experiments.

The significance of these findings is, as yet, beyond one's comprehension. No one, at present, can prophesy the possible value of this work. It is tempting to speculate concerning the mechanism of this sparing effect, however, we must realize that speculation is dangerous in the light of our present ignorance concerning viruses in general. The lack of the demonstration of cross immunity and flowing immune substances would lead one to believe that this sparing effect is a blocking of cellular metabolism or cellular physiology such that the second induced infection cannot be spread by "perversion" of cellular physiology.

Dr James Denton, *New Rochelle, New York*—The immunologic mechanism which Dr. Dalldorf has described is interesting not only in connection with the diseases he has been studying but also from the obvious implications that similar relationships may be found between other virus diseases. A complete understanding of the factors responsible for this sparing effect might throw considerable light on the essential nature of virus diseases. There are obvious advantages in the study of a phenomenon that can be produced under experimental control.

Naturally, the first thing that suggests itself is the possible application of the phenomenon

to human cases of poliomyelitis. Poliomyelitis in man and in monkeys differ from each other in many important respects. The extreme rapidity with which the disease progresses in the monkey is unusual in the human disease, but does occur. The intervals in the time schedule which appear to be so important might be very different in man and more favorable for practical purposes.

There are many fundamental factors in human poliomyelitis which are still obscure. The pathogenesis is imperfectly understood. The prompt recovery of function in so many cases raises the question as to whether the nerve cells are permanently damaged at the outset or whether the harmful effects of the virus extend over a considerable time. Early complete loss of function very possibly masks progressive effects of the virus.

It is my understanding that chorionmeningitis virus has been used as a substitute for malarial therapy in France. Chorionmeningitis is generally regarded as a benign disease, but rather serious symptoms are said to have appeared in some cases. Apparently the only way to find out whether the virus may be of value in the clinical stages of poliomyelitis is by trial on human cases. A very serious difficulty arises here on account of the difficulty in making a dependable diagnosis of poliomyelitis in the early phases of the disease. Paralysis is necessary for a final diagnosis, and there are possibly errors even with this.

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## STOP TINKERING

Upheavals of tested institutions have ruined the continent of Europe. Liberties and freedom of enterprise of the individuals have been sacrificed on the altar of so-called social reform. Therefore, let us stop tinkering with our own institutions and avoid the importation of European political tragedies through duplication of European systems and procedures. God knows

we have gone far enough in relegating our rights to the whims of politicians, remarks the *Nebraska State Medical Journal*. Medical service rendered under the American plan has been a success in every way. The American House of Medicine can continue on its steady progress only through personal and professional freedom of thought and of action.

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## THEY COME, THEY GO

Another of the old drugs is ready for the discard. Several decades ago, creosote was highly recommended in the treatment of respiratory diseases, and it once was advocated in the management of tuberculosis. The Council on Pharmacy and Chemistry of the American Medical Association has made a protracted study of the matter and in a report published in the *Journal of the American Medical Association* for November 11, 1939, it is stated that creosote lacks value in these cases. Formerly it was claimed that creosote increased sputum production, but the Council is unable to substantiate this claim.

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## CONQUEST OF SYPHILIS

"The problem presented by the prevalence of syphilis may appall us, but let me point out that twenty-five years ago this was true also of diphtheria, which at that time caused about 1,400 deaths in a single year. This year, diphtheria deaths will probably not exceed twenty-five. With the means at our disposal we can make much greater advance in the future in the conquest of syphilis, and it is my hope that the time will not be too far distant when syphilis can be discussed as largely a problem of past history."—John L. Rice, M.D., Commissioner of Health, New York City.

# IMMOBILIZATION OF THE CHEST IN PLEURISY AND RIB FRACTURE

H J CHRISTENSEN, M D , Poughkeepsie, New York

**A** PHYSICIAN wishing to immobilize the chest must choose between adhesive strapping and an immobilization belt. This choice is nearly a hypothetical one because immobilization belts have not gained wide enough use to receive such consideration. Adhesive strapping is almost exclusively used. The obvious reasons are that adhesive is cheap, nearly always on hand, and it is the established practice.

It is the purpose of this paper to establish, in fact, this choice by describing immobilization belts which are as readily available and nearly as cheap as adhesive plaster itself. Two types of immobilization belts which any doctor can make of cotton, gauze bandage, adhesive, and tongue blades, are here described. They are Sam Browne type of belts having tongue blades as stays and hospital cotton as padding.

The objections to adhesive are skin irritation, slipping of the adhesive with loss of immobilization, the time limit when the skin will no longer bear up under the adhesive, inability to examine and treat the parts covered by the adhesive, and finally, the mounting discomfort of the patient until the adhesive is removed. The ordeal of removal is approached by some patients as a major operation.

There are certain requirements which the immobilization and the method of immobilization itself should satisfy. They may be listed as follows:

## Immobilization

- (1) adequate
- (2) sustained
- (3) controlled
- (4) comfortable

## Immobilizer

- (1) cause no skin irritation
- (2) adjustable
- (3) temporarily removable (to permit

examination and treatment of parts which it covers)

- (4) low cost
- (5) easily made
- (6) of readily available "office" or "emergency" materials
- (7) light weight
- (8) duration of application unlimited

Two types of belts embodying all the above features, made of cotton, gauze bandage, adhesive, and tongue blades (Fig 1) are here described.

## Pleurisy

In pleurisy, warmth in addition to immobilization is desired. To satisfy both these requirements the belt is made as follows:

The "core" or stay portion (Fig 2) is made by placing tongue blades side by side, about three-eighths of an inch apart, on a piece of adhesive which is long enough to encircle the chest outside the cotton padding. This "core" is then placed in the middle of a single piece of hospital cotton of one or two layers according to thickness, and of adequate length to encircle the lower chest, and the overlapping cotton edges (giving extra warmth) are folded over and secured by spiral turns of wide gauze bandage running the length of the belt (Fig 3). A wide strip of adhesive running the length of the belt secures the spiral turns of bandage on the outside.

A shoulder strap (Fig 5) is constructed of adhesive and cotton with a few stays of tongue blade cut to width and placed under the adhesive over the crest of the shoulder to prevent wrinkling.

The belt is now placed about the lower chest with the two ends meeting at the anterior axillary line on the side opposite the lesion. These ends are bridged and held together at the proper degree of immobilization with a wide piece of ad-



hesive of adequate length to hold securely. The shoulder strap is now placed over the shoulder on the same side as the lesion and attached to the outside of the belt by adhesive (Fig 6). Placing the shoulder strap over the shoulder of the side opposite the joined ends of the belt allows the belt to be slipped off over the arm. It would otherwise have to be slipped off over the head.

To remove the belt temporarily for examination or treatment (Fig 7) the adhesive joining the two ends of the belt is pulled back until the ends are released. The belt is then slipped off the arm. When the belt is replaced the same adhesive will serve again to hold the ends securely together. By proper adjustment of this piece of adhesive any degree of immobilization can be obtained.

As the cotton padding packs the belt loosens and adjustment is made, if necessary, by cutting off a tongue blade segment from one end allowing the belt to be drawn tighter. Patients can be instructed to keep the belt adjusted to give maximum comfort. If the cotton becomes soiled it may be replaced by fresh cotton over the old tongue blade "core." No adhesive should contact the skin.

### Rib Fracture

In rib fracture, immobilization alone is desired. Warmth is not a necessary consideration. A cool, lightweight belt (Fig 4) is constructed by using only sufficient cotton padding to face the inner side of the belt, and attached by spiral turns of wide gauze bandage to the tongue blade "core." Thus the cotton does not overlap the edges of the "core" as described in the pleurisy belt. A wide piece of adhesive runs the length of the outside of the belt to secure the spiral turns of gauze bandage. The belt is applied in the manner described above.

In obese individuals with a high protruding abdomen no shoulder strap is necessary as the belt will not slip down. A very desirable feature is that belts of large size may be made up in advance and kept ready for use later to be cut down to

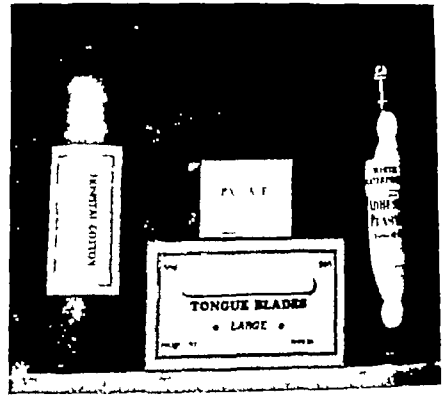


FIG 1 Materials

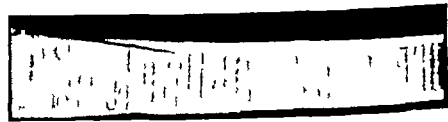


FIG 2 Construction of "core." Tongue blade stays on adhesive which overlaps to bind ends of tongue blades

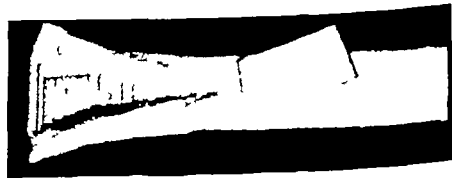


FIG 3 Construction of "pleurisy" belt (outer side) showing overlapping cotton edges and wide adhesive securing spiral turns of gauze bandage.

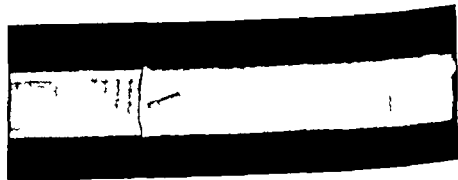


FIG 4 Construction of "rib fracture" belt (inner side) showing cotton padding facing the inside of the belt only, and secured by spiral turns of gauze bandage



FIG 5 Construction of shoulder strap (inner side) with cotton turned back to show stay construction over crest of shoulder

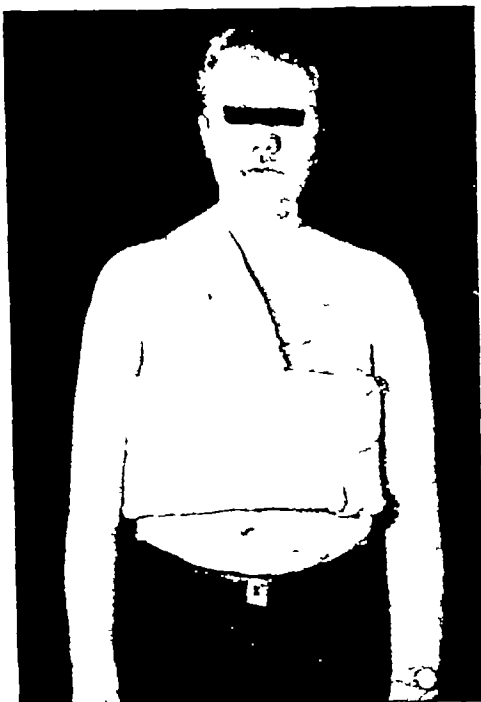


FIG 6 "Pleurisy" belt applied

suitable size by simply cutting off a sufficient number of tongue blade segments with bandage scissors. A single piece of hospital gauze cut to size to cover the cotton may be used instead of the spiral turns of gauze bandage. Gauze bandage is illustrated because it is almost always on hand. A single piece of cotton outing flannel used as above to cover the cotton makes a still better belt. The waterproof type of adhesive is best suited for the belt.

Theoretically it is considered unwise to immobilize the "good" side of the chest along with the "bad" side. It is reasoned that the good side should be free to compensate for the restriction of the opposite side. Adhesive strapping properly applied, must extend well onto the good side, and in doing so also causes some restriction



FIG 7 Showing method of removing and reapplying belt after treatment

of the good side. In actual practice no bad effects on the good side have been noted. Furthermore, the circular type of belt has survived the test of several years' use. To my knowledge, the circular type of belt made of canvas or webbing reinforced with corset steels has been available at supply houses for several years.

The Sam Browne type of belt made of canvas or webbing reinforced with corset steels has been used for chest immobilization. These never gained wide use because of expense and cleaning difficulties. Dr. Richey L. Waugh,<sup>1</sup> New Orleans, used plaster-of-paris fixation bandages applied Sam Browne fashion to the chest. This is an excellent device, but the fuss and muss of applying plaster of paris has deterred its use. Furthermore, the belt cannot be made up in advance and kept on hand ready for use as those here described.

<sup>1</sup> Waugh R. L. J Bone & Joint Surg 17 4 1067 (October) 1935

Patient (nervously) "I suppose the operation will be dangerous, doctor?"

Doctor "Nonsense! You couldn't have a dangerous operation for forty dollars"—*Medical Record*

"Does your husband still complain of thirst?" asked the doctor.

"He did at first," replied Mrs. Jenkins, "but I gave him a glass of water every time and he soon stopped."—*Medical World*

# OBSTETRICS IN A GENERAL HOSPITAL

## Ten Thousand Cases at the Bronx Hospital

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(From the Obstetrical Service of the Bronx Hospital)

PRACTICALLY all of the published statistics dealing with maternal and fetal mortality are from strictly lying-in hospitals, or from hospitals where the "maternity staff" is composed entirely of men who have specialized in obstetrics. In former publications<sup>1,2</sup> we have reported the statistics from a general hospital where many of the confinements are attended by doctors in general practice, with an operative incidence of 23.9 per cent, a maternal mortality of 0.3 per cent, and a corrected infant mortality of 3.1 per cent.

It has been said that "home delivery, even under the poorest conditions is safer than hospital delivery," also that "delivery by a midwife is safer than by a doctor," and again, "the general hospital is a veritable cesspool of puerperal infection."<sup>3</sup> This report is made with the purpose of showing that in a well-regulated general hospital where the family doctor is permitted to confine his patients within certain definite restrictions it is possible to obtain results which compare favorably with those obtained in strictly maternity hospitals. This study is based on the experience at the Bronx Hospital from the time it entered its new quarters in July, 1932, through March, 1938. During this period there were admitted 10,000 women in labor, 3,166 on the ward service and 6,834 on the private services. These were in the proportion of 1 to 2.15.

On the ward service the expectant mother is required to register with the antepartum clinic before the seventh month of gestation. She is seen at intervals of two weeks and in the last month of gravidity every week to the time of delivery. The antepartum care consists of

a complete physical examination including blood pressure and urine examination, mensuration, hygienic, and dietetic regulation. The appearance of signs of toxemia, blood dyscrasia, or any complication indicates more frequent observation in the regular clinic, or a special clinic, or when necessary, hospitalization. During labor unnecessary examination and interference is eliminated, rectal examination instead of vaginal being used, and the work of the staff is carefully supervised. The private services observe a reasonable degree of proper prenatal care, and no operative procedure other than the low forceps operation can be done except under supervision. The low forceps operation is permitted only to alumni on the staff or to the men who have already shown their ability to perform this operation. All forceps operations are reviewed in the monthly obstetric conferences and also at a meeting of a committee of the medical board consisting of the attending gynecologist and obstetricians. There the indications and the results are discussed with the physician usually being present. No other operative procedure can be done except by the obstetric staff and the attending gynecologists. To three other men, permission has been specifically granted by the medical board because of their known ability.

All cesarean cases are reviewed by the committee referred to above and the surgeon's presence at this time is required. There is frank discussion of the indications and procedures employed irrespective of the result. This operation is limited to the attending gynecologists and obstetricians without previous con-

*Read by invitation at the meeting of the Section of Obstetrics and Gynecology, the New York Academy of Medicine, December 27, 1938.*

TABLE 1—OPERATIVE INCIDENCE ENTIRE SERIES

Operation	Total No		Maternal Deaths		Infant Deaths	
	Ward	Private	Ward	Private	Ward	Private
Cesarean section	52	227	1	10	4	24
High forceps	5	20				5
Mid forceps	140	385	2	2	5	16
Low forceps	251	1081		1	8	13
Version	27	46		1	3	22
Breech extraction	48	59			10	19
Craniotomy	4	5		1	4	5
Totals		2350		18	138	138 per cent
Frequency for operative cases				0 88 per cent		6 1 per cent

sultations All others are required to have approval by one of these before the laparotomy can be performed.

Provision has been made for the application by a surgeon for permission to do an elective cesarean He is required to submit a letter setting forth his reasons and this is considered at a meeting of the committee As a result of this committee's work the operative incidence as well as the number of cesarean operations has decreased

*Operation Incidence*—Of the 10,000 labors operative delivery was performed 2,350 times, a frequency of 23 5 per cent, with an infant mortality of 6 1 per cent (138 in 2,350) for the operative cases, as compared with 1 38 per cent for the total series In the operative cases a maternal mortality of 0 88 per cent was noted as compared with a general maternal mortality of 0 23 per cent It is of interest to note that of the 3,166 labors on the ward service, operative delivery was performed 507 times, a frequency of 16 01 per cent with an infant mortality of 1 09 per cent for the total cases and 6 7 per cent for the operative cases and with only 3 maternal deaths (Table 1)

*Forceps Operation*—On the private services the low forceps operation was done in the greater proportion of the cases as a prophylactic measure. The low forceps operation on the ward service, however, was strictly limited to definite indications in the interest of mother or child, i e, either maternal exhaustion from prolonged labor, or fetal distress as indicated by the character of the heart rate in addition to the mere appearance of meconium

There were 21 infant deaths in all the low forceps deliveries, as follows 5 congenital anomalies, 5 neonatal deaths due to cerebral hemorrhage, and 11 deaths from unknown causes (all these deaths were autopsied)

The 525 mid forceps operations in the entire series are divided into two groups (a) head anterior at the time of operation, 210, and (b) head posterior or transverse arrest position, 315

The indications were strict and ran parallel to those for low forceps on the ward service

The 21 infant deaths in the mid forceps deliveries include 10 cases where fetal heart was lost during labor, 3 babies that died of bronchopneumonia within the lying-in period, and 8 deaths due to cerebral hemorrhage (all these were autopsied)

The high forceps operation was done 25 times (4 times more frequently on private than on ward services) In all cases the operation was done for fetal distress on unengaged heads where versions were contraindicated The 5 fetal deaths all showed cerebral hemorrhage.

In this group of forceps operations there were 5 maternal deaths The details are appended (1) A primigravida who had a mid forceps for fetal distress after four and one-half hours of full dilatation, occiput anterior She sustained a left cervical laceration which was repaired The cervix and vagina were packed and 1,000 cc. of glucose infusion was given After some time, bleeding recurred and she died five and one-half hours after delivery after a further attempt to repair the cervix (2) A primigravida, who had a mid forceps operation for ineffectual pains The patient developed circulatory collapse and anuria and died in uremia four days later (3) A primigravida, admitted with a left lower lobar pneumonia and in labor with full dilatation and head on the perineum A low Elliott forceps on a premature 4 lb 8 oz baby was done. The baby is living The mother expired the third day, postpartum, in circulatory failure (4) A primigravida twin pregnancy, was admitted for vaginal bleeding She was bagged but the cervix dilated very slowly (four days) Meanwhile the patient developed a temperature. At the end of four days, because of fetal distress, a mid Kielland forceps was done on the first baby for fetal distress, the second baby, by version and extraction The placenta was removed manually The patient developed sepsis and expired. Necropsy-septic endometritis and suppurative phlebitis right uterine and internal iliac veins The babies are living (5) A primigravida, had a mid forceps operation for fetal distress—O A position Elliott for-

ceps failed to move the head, and Kielland forceps were substituted—8 lbs 10 oz stillbirth was delivered. The patient developed circulatory failure and expired the third day postpartum.

Analysis of these deaths shows 1 due to pneumonia, 1 due to sepsis, 1 due to hemorrhage, and 2 due to circulatory failure, probably sepsis.

TABLE 2—FORCEPS MORTALITY

Type Forceps	Sepsis	Maternal Hemorrhage	Mortality Pneumonia	Circulatory Failure
Low			1	
Mid	1	1		2
High				
Totals	1	1	1	2
		5		

INFANT MORTALITY

Type Forceps	Anomalies	Broncho pneumonia	Prolonged Labor	Cerebral Hemorrhage	? Causes
Low	5			5	11
Mid		3	10	8	
High				5	
Totals	5	3	10	18	11
			47		

*Versions*—Internal podalic version and extraction was employed 73 times, an incidence of 1 in 137 or 0.7 per cent with the indications shown in Table 3.

Here the fetal deaths included 6 premature babies (less than 3 lbs in weight), 12 full term intrapartum stillbirths (8 after failure of forceps), 1 macerated fetus, 3 congenital anomalies in compatible with life, and 3 full term neonatal deaths from cerebral hemorrhage.

There was 1 maternal death—a primigravida, admitted in eclamptic convulsions which could not be controlled despite Strogannoff therapy. After full dilatation, Kielland forceps failed and version and extraction was done on dead baby. Mother expired in coma one day postpartum.

*Breech Presentation*—Breech presentation was encountered 357 times, an incidence of 3.5 per cent.

The treatment was, where possible, strictly conservative, allowing labor to proceed until the buttocks had passed through the vulvar orifice, from which point manual help from the operator completed the delivery. This constituted what we called a spontaneous breech delivery. Any other procedure was termed a breech extraction. The latter was done 107 times (Table 1). In the spontaneous group there were 4 infant deaths among 250 cases, a percentage of 1.6 per cent. Two were macerated fetuses, 1 was a congenital anomaly, and 1 was premature (second of twins). In the extraction group there were 29 fetal deaths, a percentage of 25.2 per cent. Three were anomalies, 1 was a premature, 1 was a

neonatal death from partial atelectasis, and 24 were deaths in all probability due to the extraction (Table 4). The mortality for the breech extraction as a whole was thus 33 in 357 or 9.2 per cent (Table 4).

*Cesarean Section*—Cesarean section was resorted to 279 times, a frequency of 2.79 per cent or an incidence of 1 in 36. The indications are shown in Table 5. These 228 patients were operated upon only after a test of labor, the other patients including 20 in the previous section group, 19 in the "ablatio" group, 7 in the cardiac group, 4 in the elective toxemia group, and 1 in the abdominal pregnancy group, were operated upon without such labor. In all, the presenting part was unengaged at the time of operation.

The types of operation are also noted in the table, the classical operation being done 149 times, the two flap, 107 times, the Latzko, 14 times, and the Porro, 9 times (Table 5).

The Porro operation was done 5 times for placental apoplexy, 2 times for intrapartum infection, and the other 2 times for failure of the uterus to contract following classical sections both complicated by intramural fibroids.

The Latzko procedure was done for potentially infected cases, with 1 fetal death and no maternal deaths. This has been reported elsewhere (Table 5).

The details of the maternal deaths with the cesarean operation (11 in 270), a percentage of 3.9 are added.

1 Primipara at term, central placenta praevia, generally contracted pelvis. Classical section. Died on sixth postoperative day of sudden cardiac collapse. Stillbirth. Peritonitis?

2 Primipara at term, central placenta praevia. Classical section. Died on tenth postoperative day of peritonitis. Living baby.

3 Primipara at term, funnel pelvis, frank breech. Classical section. Died on sixth postoperative day from paralytic ileus. Living baby. Peritonitis?

4 Primipara at term, contracted pelvis, nonengagement at end of twenty-four hours with membranes ruptured eight hours. Two flap section. Neonatal death. Streptococcus hemolyticus septicemia.

5 Primipara at term, flat rachitic pelvis. Intrapartum sepsis. Porro section. Autopsy. Localized peritonitis. Living baby.

6 Primipara at term, flat pelvis, two flap section for nonengagement at end of thirty-six hours of ruptured membranes and eight hours of labor. Died of pneumonia. Living baby.

7 Primipara at term. Pre-eclamptic or chronic nephritic. Elective classical section.

TABLE 3—VERSIONS

Indication	No	Maternal	Mortality				Intrapartum Stillbirth	Cerebral Hemorrhage
			Premat.	Mac.	Cong	Infant		
Failure of forceps	27	1			1		8	
Second of twins	16		6					
Unengaged occiput	10							
Marginal praevia	9							
Malposition	8				2		3	2
Prolapsed cord	3			1			1	1
Totals	73	1	6	1	3		12	3

TABLE 4—BREACH

	No	Maternal Mortality	Infant Mortality				Atelect.	Extraction
			Mac.	Cong	Anom.	Premat.		
Spontaneous	250	0	2	1		1		
Extraction	107	0		3		1		24
Totals	357	0	2	4		2	1	24

TABLE 5—CESAREAN SECTION

Indication	No	Type of Operation				Mortality	
		Classical	2 Flap	Latzko	Porro	Maternal	Infant
Contracted pelvis	160	67	84	7	2	4	2
Previous section	20	17	3				
Placenta praevia	32	24	8			3	8
Fetopelvic disprop	18	6	6	6			1
Ablatio	19	12	2		5		16
Toxemia	5	5				1	
Complicating fibroids	7	5	1		2		
Cardiac	7	6	1			2	
Malposition	3	1	1	1			
Elective in toxemia	4	4					
Malformation	2	1	1			1	
Abdominal pregnancy	1	1					1
Totals	279	149	107	14	9	11	28

Expired five hours postoperative of shock. Living baby

8 Forty-two-year-old primipara Cervical malformation. Classical section after several hours of ruptured membranes Abdominal distention not relieved by exploratory laparotomy No evidence of peritonitis at operation. Expired six days postoperative. Living baby

9 Primipara. Placenta praevia Classical section after two days of ruptured membranes (fetal heart lost on admission) Expired on sixth day with signs and symptoms of peritonitis Dead baby

10 Primipara Rheumatic heart disease. Class III Classical section immediately upon rupture of membranes with passage of meconium Expired four days postoperative of cardiac failure. Living baby

11 Primipara. Rheumatic heart disease Class II B Classical section after 6 hours trial of labor Expired on table. Living baby Cardiac failure, acute.

To summarize, there were 2 cardiac deaths, 6 deaths due to peritonitis, 1 due to sepsis, 1 due to pneumonia, and 1 from postoperative shock

The 28 fetal deaths occurred 16 times in cases of "Ablatio" (fetus already dead when section was done), 8 in cases of placenta praevia where fetal heart was lost before operation, 1 in a mother who died of streptococcus hemolyticus

sepsis, 1 a high forceps had been attempted at home before admission to the hospital, and later a Latzko section done in the interest of the mother, one neonatal death from unknown causes, and one neonatal death in the abdominal pregnancy

### Maternal Mortality

In this series of 10,000 cases there were 23 maternal deaths, a frequency of 0.2 per cent, already described under the different headings and itemized in Table 6 and summarized by causes in Table 7

### Infant Mortality

In this series there were 423 infant deaths, a mortality rate of 4.23 per cent, 97 were macerated fetuses and 34 were congenital anomalies incompatible with life, leaving a corrected mortality of 2.92 per cent. Of these, 132 were premature infants (i.e., less than 3 pounds) leaving a full-term corrected infant mortality of 1.6 per cent.

### Comment

We have presented an analysis of a series of 10,000 cases in a properly

TABLE 6—MATERNAL MORTALITY

Hosp No	Grav	Type of Delivery	Indications for Delivery	Cause of Death	Mother Lived
37452	I	Mid forceps	Fetal distress	Hemorrhage from cervical laceration	5 hours
38209	I	Mid forceps	Ineffectual pains	Circulatory collapse	4 days
72892	I	Low forceps	Lobar pneumonia	Lobar pneumo	3 days
80180	I	Mid forceps	Fetal distress	Sepsis	12 days
85740	I	Mid forceps	Fetal distress	Circulatory failure	3 days
88618	I	Version	Failure of forceps in toxemia	Eclampsia	1 day
85052	I	Classical section	Central praevia	Peltonitis? Sudden cardiac col-lapse	6 days
40100	I	Classical section	Central praevia	Peltonitis	10 days
42845	I	Classical section	Funnel pelvis	Peltonitis? Paralytic ileus	6 days
*43415	I	Two flap section	Contracted pelvis	Streptococcus hemolyticus sepsis	10 days
*44529	I	Porro section	Intrapartum sepsis	Localized peritonitis	6 days
47503	I	Two flap section	Flat pelvis	Pneumonia	3 days
61835	I	Classical section	Chronic nephritis	Postoperative shock	On table
67850	I	Classical section	Cervical malformation	Peltonitis? Paralytic ileus	6 days
67639	I	Classical section	Placenta praevia	Peltonitis	4 days
75232	I	Classical section	Rheumatic heart disease	Cardiac failure	On table
80068	I	Classical section	Rheumatic heart disease	Cardiac failure	On table
93471	I	Craniotomy	Attempted forceps Bandl's ring	Sepsis	6 days
36582	I	Spontaneous delivery		Sudden pulmonary edema	30 min.
*47100	I	Spontaneous delivery	Intrapartum influenza	B Influenza sepsis	6 days
50532	II	Spontaneous delivery	Eclampsia	Eclampsia	21 hours
68126	I	Spontaneous delivery		Postpartum hemorrhage	On table
*75116	II	Spontaneous delivery		Streptococcus hemolyticus sepsis	8 days

\* Autopsied cases

TABLE 7

Causes of Death	Operative Delivery	Spontaneous Delivery
Pneumonia	2	1
Circulatory failure	4	
Eclampsia	1	1
Postoperative shock	1	
Hemorrhage	1	1
Peritonitis	6	
Sepsis	3	2
Totals	18	5

equipped and properly managed general hospital where maternity work is given the importance it deserves with a resulting operative incidence of 23.5 per cent, a maternal mortality of 0.23 per cent, and an uncorrected infant mortality of 4.23 per cent.

Under proper supervision we feel that it is possible in general hospitals to show results which compare very favorably

with those reported by the strictly maternity hospitals

I am indebted to Dr Meyer Rosensohn, Attending Obstetrician, the Bronx Hospital, for his stimulating interest and helpful suggestions in the preparation of this paper

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### SAW HIM FIRST

The doctor's new secretary on her first day at work saw a magnificent blonde carrying some papers enter the office smiling sweetly

"Listen you," snarled the jealous secretary "If you try to muscle in on my territory I'll plant you among the potatoes"

"Oh, don't mind me," answered the other, "I'm only the doctor's wife."—*Medical World*

### ON HER WAY

Daughter "Mama, do angels have wings?"

Doctor's wife "Yes, dear"

Daughter "And can angels fly, Mama?"

Doctor's wife "Yes, dear"

Daughter "Daddy said nurse was an angel last night. When will she fly?"

Doctor's wife (grimly) "Immediately, dear!"—*Medical World*

# LATE IRRADIATION REACTION IN BLADDER WALL FOLLOWING THE USE OF RADIUM IN UTERINE DISEASE

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**E**XTENSION of uterine cancer into the genitourinary tract has been well recognized for many years. In advanced malignancy, obstruction of the urethra, invasion of the bladder wall—with or without fistula—and occlusion of the ureters, with primary kidney atrophy, hydronephrosis, or pyelonephrosis has been foreseen. But with the advent of irradiation therapy we must consider not only the complications of the natural progress of the disease but also the immediate and late effects of the treatment itself, which materially add to the difficulties of the management of this group of patients. It is of great help in planning the treatment of these patients to make a careful urologic examination before any radiation treatment is initiated. We may thus not only recognize those individuals in whom surgical treatment is of prime importance, but we will also know the status of the urinary tract before treatment is begun so that adverse developments may be interpreted in the light of the initial pathology. This paper does not concern itself with the immediate effects of irradiation treatment on the bladder mucosa, but rather with the later manifestations in those women presumably cured of uterine disease who have bladder lesions which we recognize as a result of the therapy employed. While only a small proportion of patients treated develop these late sequelae, it is desirable that their nature and importance be recognized. Determination of their cause may prevent their occurrence in future patients.

There are two phases of late radium reaction in the bladder wall—the ulcerative and the telangiectatic. In the first phase, occurring in from three months

to ten or more years after treatment, the patient, after a period of apparent good health, more or less suddenly complains of frequent and painful micturition usually accompanied by slight hematuria. Cystoscopic examination reveals, in a typical case, an area of ulceration and necrosis, surrounded by bullous edema and scattered areas of telangiectasis. A uniform finding in such cases is that the lesion appears in the midline, or just to one side of it, and just above the interureteric ligament. This phase under appropriate treatment, and if the ulceration is not too deep, heals in a few months. In an occasional case, however, the ulceration persists for a much longer period. In the telangiectatic phase the main symptom is hematuria. The bladder mucosa is studded with small telangiectatic areas in which capillary blood vessel tufts are seen, elevated above the surrounding mucosa. This phase accompanies the ulcerative stage and usually persists long after the ulceration has healed. Bleeding from these cases occasionally assumes alarming proportions, necessitating transfusion. Usually, however, the hemorrhage can be controlled by transurethral coagulation. The telangiectatic phase is undoubtedly the much milder but the more persistent form of reaction, while in turn the ulcerative phase may itself be mild and produce few symptoms.

In the majority of patients it is relatively simple to determine whether we are dealing with an extension of the malignant process into the bladder mucosa, or a late radium reaction. The diagnosis can, in most cases, be made from the cystoscopic picture. In tumor invasion the posterior wall of the bladder is first elevated (the



TABLE 6 —MATERNAL MORTALITY

Hosp No	Grav	Type of Delivery	Indications for Delivery	Cause of Death	Mother Lived
37452	I	Mid forceps	Fetal distress	Hemorrhage from cervical laceration	5 hours
38209	I	Mid forceps	Ineffectual pains	Circulatory collapse	4 days
72892	I	Low forceps	Lobar pneumonia	Lobar pneumo	3 days
80190	I	Mid forceps	Fetal distress	Sepsis	12 days
85740	I	Mid forceps	Fetal distress	Circulatory failure	3 days
58618	I	Version	Failure of forceps in toxemia	Eclampsia	1 day
35052	I	Classical section	Central praevia	Pentontitis? Sudden cardiac col-lapse	6 days
40100	I	Classical section	Central praevia	Pentontitis	10 days
42845	I	Classical section	Funnel pelvis	Pentontitis? Paralytic ileus	6 days
*48415	I	Two flap section	Contracted pelvis	Streptococcus hemolyticus sepsis	10 days
*44529	I	Porro section	Intrapartum sepsis	Localized peritonitis	6 days
47503	I	Two flap section	Flat pelvis	Pneumonia	3 days
61835	I	Classical section	Chronic nephritis	Postoperative shock	On table
67950	I	Classical section	Cervical malformation	Pentontitis? Paralytic ileus	6 days
67639	I	Classical section	Placenta praevia	Pentontitis	6 days
*75232	I	Classical section	Rheumatic heart disease	Cardiac failure	4 days
80088	I	Classical section	Rheumatic heart disease	Cardiac failure	On table
63471	I	Craniotomy	Attempted forceps Bandl's ring	Sepsis	6 days
36582	I	Spontaneous delivery		Sudden pulmonary edema	30 min.
*47100	I	Spontaneous delivery	Intrapartum influenza	B Influenza sepsis	6 days
50532	II	Spontaneous delivery	Eclampsia	Eclampsia	21 hours
63126	I	Spontaneous delivery		Postpartum hemorrhage	On table
*75116	II	Spontaneous delivery		Streptococcus hemolyticus sepsis	8 days

\* Autopsied cases

TABLE 7

Causes of Death	Operative Delivery	Spontaneous Delivery
Pneumonia	2	1
Circulatory failure	4	
Eclampsia	1	1
Postoperative shock	1	
Hemorrhage	1	1
Peritonitis	6	
Sepsis	3	2
Totals	18	5

equipped and properly managed general hospital where maternity work is given the importance it deserves with a resulting operative incidence of 23.5 per cent, a maternal mortality of 0.23 per cent, and an uncorrected infant mortality of 4.23 per cent.

Under proper supervision we feel that it is possible in general hospitals to show results which compare very favorably

with those reported by the strictly maternity hospitals

I am indebted to Dr Meyer Rosensohn, Attending Obstetrician, the Bronx Hospital, for his stimulating interest and helpful suggestions in the preparation of this paper

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## SAW HIM FIRST

The doctor's new secretary on her first day at work saw a magnificent blonde carrying some papers enter the office smiling sweetly

"Listen you," snarled the jealous secretary "If you try to muscle in on my territory I'll plant you among the potatoes"

"Oh, don't mind me," answered the other, "I'm only the doctor's wife."—*Medical World*

## ON HER WAY

Daughter "Mama, do angels have wings?"

Doctor's wife "Yes, dear"

Daughter "And can angels fly, Mama?"

Doctor's wife "Yes, dear"

Daughter "Daddy said nurse was an angel last night. When will she fly?"

Doctor's wife (grimly) "Immediately, dear!"—*Medical World*

sion A more extensive invasion of the submucosal and muscle layers is sometimes seen and in these cases it is often difficult to distinguish between the histologic picture of late radium reaction and that of infiltrating carcinoma of the bladder. The cells in the former show a change in cellularity and in some cases frequent mitotic figures are seen. While this overgrowth of squamous epithelial cells somewhat resembles that seen at the edges of a skin ulcer, in many cases it is much more irregular in its growth and more penetrating in its infiltration—a condition possibly due to the more areolar nature of the underlying stroma in the bladder wall. So extensive and irregular was this infiltration of submucosa and muscle in 2 of the biopsies sent to the laboratory without adequate history, that a histologic diagnosis of carcinoma was primarily made, to be subsequently altered when a more complete review of the clinical history was made. Both of these patients have recovered without further radiation and on the usual treatment. In these 45 patients, in whom late radium reactions in bladder mucosa were observed, the age incidence was identical with that of the age incidence of malignancy in the cervix, and as most of our cases suffered from this primary condition this observation is not significant. An analysis of the length of time elapsing from the application of radium to the onset of bladder symptoms showed a wide variation of from three months to eleven years. In 65 per cent of the patients, however, these symptoms appeared in from nine to twenty-four months. It was noted also that the primary dosage of radiation applied was in 36 per cent of these patients below 3,500 mg hours in the pelvis. This is the maximum dosage which Dean considers safe from the standpoint of bladder damage. The remaining 64 per cent of this group of patients received more than 3,500 mg hours radiation in the pelvis. This was almost universally applied in the form of tandem tubes of 100 mg each in the uterus for a total of 2,400 mg hours supplemented by gold seeds of radium emanation

in the cervix for an additional dosage of 1,000 to 2,000 millicurie hours, making a total of 3,400 to 4,400 mg and millicurie hours.

### Treatment

If careful pelvic and cystoscopic examination fail to make the diagnosis certain, it is safer to use a trial period of treatment for radium reaction. In the ulcerative phase, effort must be directed to control infection and to prevent the development of calcareous deposit in the ulcerated area. Instillation of argyrol or similar antiseptic solutions once or twice weekly, with the administration of the newer urinary antiseptics, sulfanilamide or mandelic acid, may be used. Calcium mandelate is well suited to this type of lesion, as it helps to maintain the acidity of the urine and it is also bactericidal. Urotropin should be avoided as it is apt to further irritate the ulcerated bladder. With the treatment, relief of symptoms is usually fairly prompt, though the ulceration may persist for several months. Occasionally the lesions respond poorly to the above treatment and, due to the action of urea splitting organisms, the bladder becomes the seat of an alkaline cystitis and the ulcers the site of alkaline incrustations, which may have to be removed with the rongeur forceps. After the ulcerations have healed, the bladder mucosa often shows telangiectasis in the healed area with occasionally hematuria which may be profuse.

The question of individual idiosyncrasy in the causation of these bladder lesions has received considerable attention. The fact that a very small proportion—a fraction of 1 per cent—of patients who have had radium treatment in the pelvis, show late bladder reactions would perhaps lend some point to this explanation. We have seen late radium reaction in the bladders of patients treated with minimal doses of from 800 to 1,000 mg hours for uterine fibroid. However, other factors must be considered. Among these, the improper placing of tubes or seeds, or accidents such as the slipping of radium bear-

bombardment of French observers) The mucosa over this area is at first unchanged but later becomes injected and edematous and finally is thrown up into ridges and folds, until, with the eruption of the tumor cells through the mucosa, typical nodular masses of tumor tissue can be seen. In contrast to this cystoscopic picture, in late radium reaction we find one or more sharply circumscribed areas of slough and ulceration. Immediately surrounding these areas is found a zone of bullous edema while interspersed between or around the ulcerations typical blood vessel changes are noted, with varying degrees of telangiectasis, from simple dilated vessels to definite elevated areas showing thickened mucosa underlaid by masses of dilated vessels. These changes are confined to a definite location in the bladder wall, i.e., just above the interureteric ligament and in the midline or very close to it. Symptomatology is also significant. Invasion of the bladder wall by tumor gives symptoms of insidious onset, slowly increasing in severity, with first a frequency of urination, increasingly painful, with eventual hematuria. In the late radium reaction, on the other hand, bladder discomfort is abrupt in onset with markedly frequent and painful urination and mild hematuria, or with marked and persistent hematuria.

Induration at the base of the bladder calls for careful consideration. It is usually present in tumor invasion but may also be found if deep ulceration of the bladder wall occurs. Absence of induration is highly suggestive of late radium reaction. In these patients the cystoscopic picture should verify the diagnosis. Occasionally, however, patients are seen in whom the diagnosis is still in doubt and in these a biopsy should be made.

The importance of differential diagnosis, as between tumor extension and late radium reaction, is of paramount importance. In the former, further irradiation is indicated, whereas in the latter it is emphatically contraindicated, as further insult to already damaged tissues might be disastrous.

Histologic study of tissue from 45 patients in whom clinical symptoms of bladder irritation were reported at the Institute shows interesting pictures. Where the material received includes the deeper portions of the submucosa and parts of the muscular wall, it is noted that the larger vessels show those changes which have long been recognized as possible results of radiation. This condition in the bladder wall of patients who have been subjected to proximate radiation therapy has been definitely referred to by Dean and others. In these cases we may observe thickening of the intimal layer with, in many instances, complete occlusion of the vessel lumens. A generalized fibrosis is apparent in these areas with marked increase in connective tissue of adult type. The superficial lesion consists of a subacute inflammatory infiltration of the submucosa with plasma and round cells accompanied by a proliferation of connective tissue cells of fibroblastic and myxomatous type below the surface epithelium. In this area, in most cases, a large number of delicate new formed capillaries appear—an apparent attempt to furnish the needed blood which the larger and deeper vessels now fail to supply. Areas of degeneration and necrosis appear in the epithelial cells of the bladder mucosa with eventual desquamation of the epithelial layer and the appearance of an ulcer. In the ulcerated area granulation tissue is frequent and necrosis common. The necrosis may extend deeply into the bladder wall and dense infiltration with polynuclear leukocytes is often seen. We wish, however, to call particular attention to an unusual and often misleading proliferation of squamous epithelium frequently seen in specimens removed from the bladder mucosa of these patients. In many instances, even before the ulceration of the epithelial lining of the bladder, islands of squamous epithelium are noted in the submucous area close to the epithelial layer but apparently definitely separated from it. The cells in these islands are usually well stained in fixed preparations and show signs of cellular activity and cell divi-

fistulas have been deliberately made, with excellent ultimate results

The picture is entirely different where ulcer alone exists, as these unfortunates suffer for months and even years. They need all the mental support which can be given to keep up their morale and not become hopeless drug addicts. These ulcers frequently become encrusted with phosphates which add greatly to the patient's suffering when they separate and are voided. Bleeding and infection are not infrequently present. The former (bleeding) has been fatal in one instance observed.

The best treatment is prevention, as Dr Herger has suggested. However, when ulceration is present a study of the infecting organism with appropriate internal urinary antiseptics to prevent phosphates forming and to keep the urine as sterile as possible, is in order.

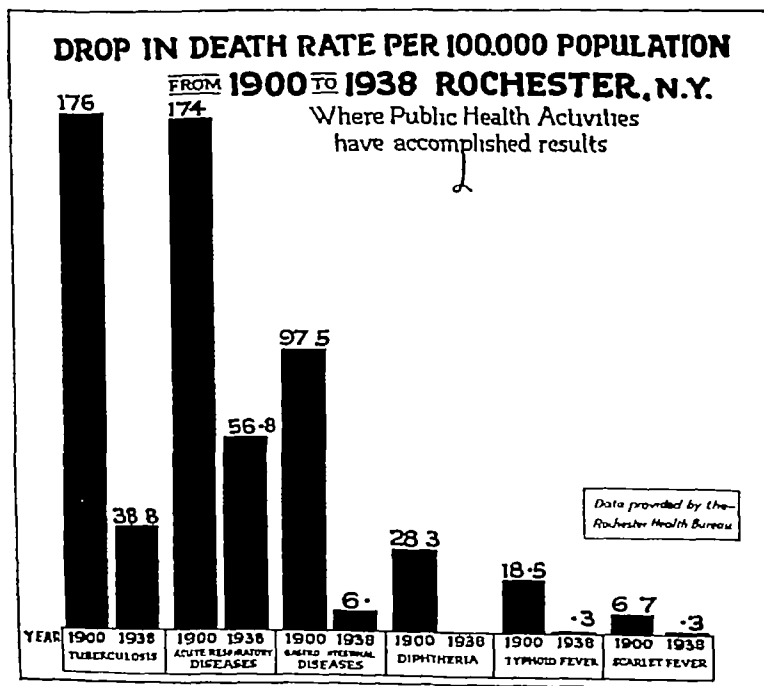
As in certain types of renal and ureteral lithia-

sis acid sodium phosphate ammonium chloride internally, and phosphoric acid solution locally should be avoided as the calcium and phosphorous elimination will be increased, which will only add to the difficulties already present. Locally, soothing antiseptics as neosilvol, argyrol, weak solutions of mercurochrome, and neutral acriflavin have been used with some success. Novocain 4 per cent locally, followed in five minutes by diothane  $\frac{1}{2}$  per cent, may give the sufferer a few hours of sleep at night.

Sedatives must be used with caution, especially the opiates. It is well to confine oneself to codeine which may be augmented by acid acetylsalicylate or the barbiturates.

At best the situation is a trying one to both patient and doctor.

In conclusion, let me thank the officers of this Section and Drs Herger and Thibaudeau for inviting me to discuss this presentation.



ing tubes from the uterine cavity into the vagina, must be considered of prime importance, because by such errors of technic and accidents, the bladder mucosa may be subjected to an unwarranted dose of radiation. Again in cervix carcinoma where the bulk of the tumor lies in the posterior lip and in the posterior portion of the canal, intensive radiation treatment in this area is particularly apt to affect the base of the bladder. It would seem probable also that these reactions usually follow a single fairly large radiation dosage in the pelvis. Some observers, notably those of the French school, advocate smaller divided doses given at intervals, in the hope of avoiding this complication. It would seem evident, therefore, from a consideration of the facts at hand that in order to prevent the occurrence of this complication of radium treatment in the pelvis, the following suggestions should be of value:

1. Technical and anatomic errors should be avoided.

2. Radiation dosage in the treatment of pelvic lesions should be divided, with repetition at proper intervals.

3. Careful urologic examination should be made before radiation treatment is started.

## Conclusions

1. A small proportion of female patients treated by radium in the pelvis develop bladder lesions which have been classified under the heading of late radium reaction.

2. We have reviewed 45 such cases treated in the State Institute.

3. Care should be taken to distinguish this condition from primary or metastatic malignancy in the bladder wall.

4. The histologic picture in biopsy specimens from the bladder in these cases can closely simulate primary or metastatic malignancy in the bladder wall.

5. In any patient who complains of bladder symptoms after having received radium treatment in the pelvis, regard-

less of the dosage or elapse of time since treatment, this condition should be kept in mind.

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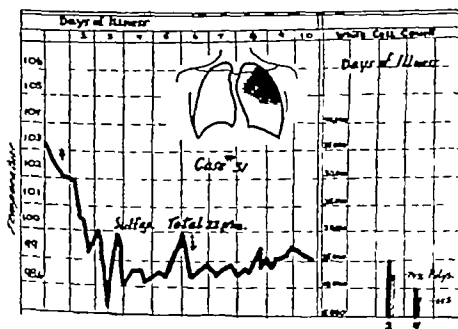
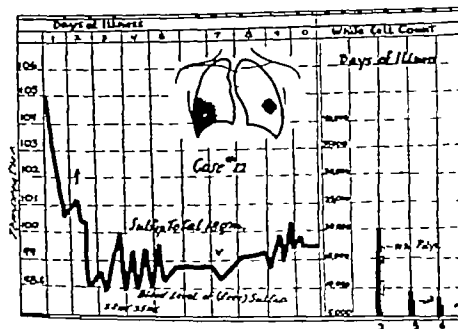
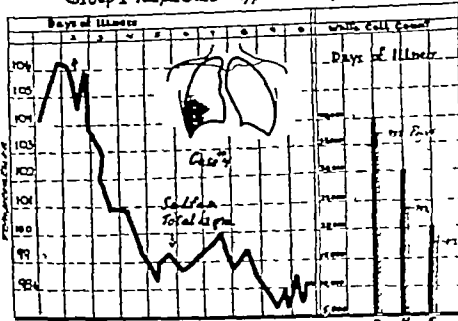
## Discussion

Dr Frederick J. Parmenter, *Buffalo, New York*—Drs Herger and Thibau deau have again wisely called our attention to the importance of differential diagnosis of radium ulcer of the bladder from the granulomas or tumors which so commonly occur. It would indeed be disastrous if a radium ulcer received additional radiation because of this error in diagnosis.

Several ways of arriving at a correct diagnosis are available. First, a carefully taken history which would reveal whether radium or x-ray therapy had ever been employed. In Dean's series, the average time of onset after the radium or x-ray therapy was one and a half or two years. In Dr Herger's series, the shortest was three months and the longest thirteen years. Second, if x-ray therapy alone has been employed, discoloration of the skin of the abdomen, external genitalia, and thighs may be observed on examination. Later, telangiectasis is common. Third, on cystoscopic examination, as Dean has pointed out, the location of the lesion upon the lower wall of the bladder in the midline is very suggestive. Fourth, biopsy is very important and will, if carefully interpreted, usually lead to a correct solution of the problem. It is the failure to remember these facts that leads one astray.

As has been pointed out, the effects of radiation upon the bladder may be comparatively slight, or very intense leading to ulcer in some instances and to perforation and fistula in others. In the perforation group, quite often the tissues will heal in time so that plastic repair can be successfully carried out. Perhaps these fistulas may be a blessing in disguise, because in other intractable bladder conditions, vesicovaginal

Group I Temperature dropped Cautically 48-72 hours



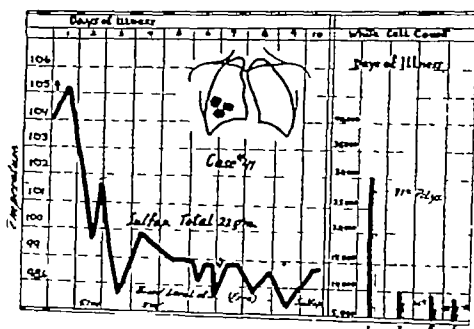
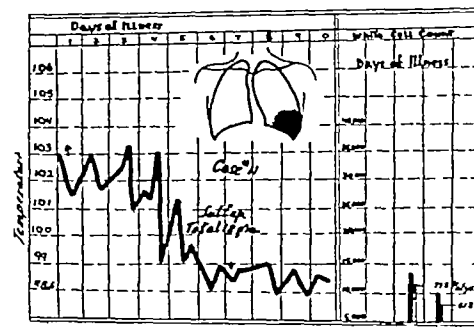
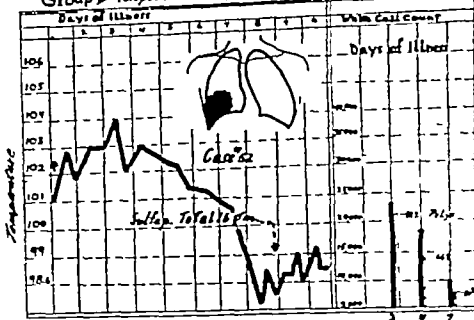
1 Sulfapyridine Started  
2 Sulfapyridine Skipped

CHART 1 Illustrates cases where the temperature dropped in forty-eight to seventy-two hours, often in twenty-four hours after the drug was started. White cell counts are marked in the right side columns, the shaded columns represent the per cent of polynuclear cells (†) Indicates beginning and (‡) the end of the sulfapyridine treatment.

group receiving sulfapyridine or polysaccharide alone.

In experimental pneumonia as well as in human beings the most striking effect is on the temperature, blood count, and general feeling. Among the recovered patients, the first group (38 cases) had a temperature drop to normal within forty-

Group II Temperature dropped lytically in a few days



1 Sulfapyridine Started  
2 Sulfapyridine Skipped

CHART 2 Shows instances of cases where the temperature came down lytically. One of the graphs shows a drop in the leukocyte count from 30,000 to 10,800 and 6,000 with reductions of the polynuclear from 91 per cent to 66 per cent and 35 per cent (Case 41).

eight to seventy-two hours. In the second group (11 cases) the temperature came down to normal within four to eight days. The third group (13 cases) represents pneumonias where the temperature came down in two to three days but rose again on account of complications such as pleural effusion or new foci of infection (see Charts 1, 2, 3). Of the 81 cases, 19 died, 62 recovered (death rate 23.5 per cent).

# EFFECT AND TOXIC EFFECT OF SULFAPYRIDINE IN OLD AGE PNEUMONIA\*

PAUL KAUFMAN, M D, New York City

(From the Second Medical Division of Welfare Hospital)

**A** REVIEW of the literature<sup>1</sup> on sulfapyridine treatment of pneumonia reveals that most of the published cases have been children, young adults, or middle-aged patients. It seemed, therefore, of peculiar interest to try the drug in old age pneumonia, a disease which is generally known to have a very high fatality rate.

Old age pneumonia is not a disease per se, however, clinicopathologic studies of a great number of old age pneumonia cases within the past years gave evidence of certain characteristic features which differentiate it from pneumonia of the young. It is often a feverless, complicated, insidious, and long drawn-out disease. Circulatory disturbances are almost always present. The forms might be either primary lobar croupous pneumonias, or confluent ones by the merging of lobular patches, frequently, single patches of lobular, or rarer, true bronchial pneumonias are present. Atelectasia, pulmonary edema, and renal involvements are more common than in the young. These differences and the lower rate of absorption and excretion of sulfapyridine and the lower basal metabolism make the effect and toxic effect of sulfapyridine less predictable in the old than in the young.

In this series, since the end of 1938, all together 81 pneumonia cases (46 men and 35 women) received sulfapyridine treatment. In all cases the diagnosis of pneumonia was confirmed by x-ray. Typing was attempted in all, and blood cultures in a great majority of cases, but only a small percentage showed positive results.

*Age Distribution*—A majority of the patients belonged to the age decades

between 70-79 (34 cases) and 60-69 (27 cases). The rest of the cases were divided as follows: 7 between 80-89, 4 between 40-49, 7 between 50-59, and 2 were over 90 years old. We could not find any relationship between the effect of the sulfapyridine and the age decades since the number of cases in the different age groups was too small to permit any such conclusions.

*Type Distribution*—There were 8 type I, 3 type II, 13 type III, 3 type IV, 2 type VI, 5 type VIII, 1 type IX, 1 type XI, 1 type XII, 2 type XIV, and 1 type XVII. In 12 cases nontypable diplococci, and in 8 cases hemolytic or other long chained streptococci were found. There were 21 cases bacteriologically <sup>11</sup> relevant.

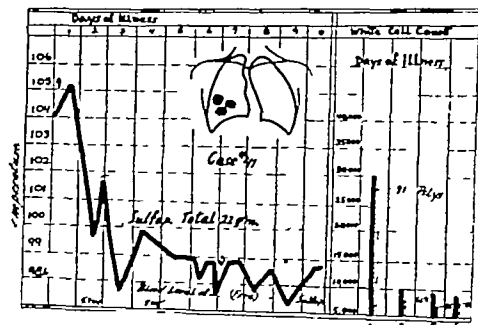
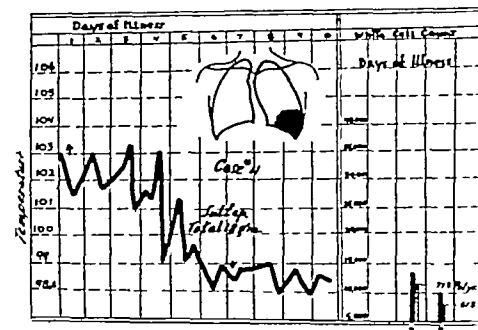
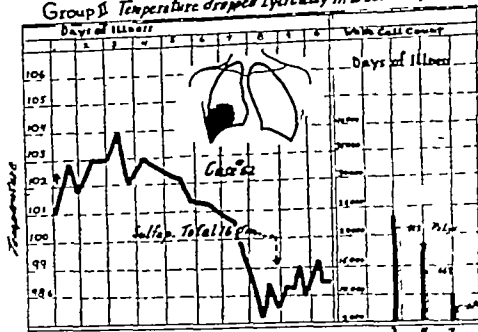
## Summary of the Clinical Experiences

*Dosage*—Usually 2 Gm were given as an initial dose followed by 1 Gm every four hours until enough of the drug had been given to make 12-22 Gm. Some times smaller initial or larger total doses were considered more advisable. The blood level of the free and combined sulfapyridine was determined in several cases. Blood counts of all the cases were taken every few days. These, the temperature, and the general improvement of the patients were indicators as to whether enough of the drug had been administered.

*Effect of the Drug*—In the course of a study on the mouse protective value of capsular pneumococcic polysaccharides against pneumococci, the effect of the drug was studied alone and in combination with the polysaccharides. Thirty mice were divided in three groups and we found that the rate of survival was almost twice as high in the group which received polysaccharide plus the drug as in the

\* This work is part of a study on old age pneumonia which was started at the Neurological Hospital in 1937 and continued at the Welfare Hospital.

Group II Temperature dropped lytically in a few days



- ! Selfhypnosis started
- Selfhypnosis stopped

CHART 2 Shows instances of cases where the temperature came down lytically. One of the graphs shows a drop in the leukocyte count from 30,000 to 10,800 and 6,000 with reductions of the polynuclear from 91 per cent to 66 per cent and 35 per cent (Case 41).

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In experimental pneumonia as well as in human beings the most striking effect is on the temperature, blood count, and general feeling. Among the recovered patients, the first group (38 cases) had a temperature drop to normal within forty-



Group B With complications of neuromuscular foci

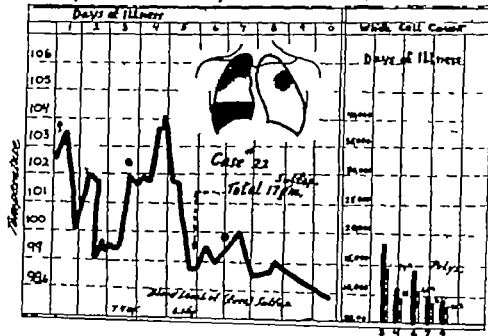


TABLE 1—TOXICITY OF SULFAPYRIDINE IN RABBIT

Date	Amount Given (Orally) Gm.	Symptoms
May 3	1 0	None
May 4	2 5	None
May 8	2 5	None
May 10	2 5	None
May 11	5 0	Restlessness vomited once
May 22	10 4	Slight twitching restlessness
May 23	10 4	Vomiting and twitching
May 24	20 8	Vomiting, muscular twitching and tremor
May 25	37 5	Immediate tremors, chills, followed by fever
June 1	12 5	Vomiting slight rigidity
June 6	37 5	
Total	142 6	
June 6		Animal chloroformed for autopsy

TABLE 2—AMOUNT OF SULFAPYRIDINE IN THE DIFFERENT ORGANS OF RABBIT AFTER TOXIC DOSES

Organ	Weight of Specimen Used (Gm)	Total Mg per 100 Gm of Organ	Free	Combined
Brain	2 5796	3 7	3 7	0 0
Liver	1 7680	23 1	5 84	17 26
Lung	2 0363	17 4	6 1	11 3
Kidney	1 9845	194 0	100 0	94 0
Heart	1 4516	16 3	7 6	8 7

showed no gross pathologic changes except in the kidneys which were strikingly pale. Microscopic examinations, however, gave the following results:

**Kidneys** kidney architecture is well preserved. Changes found: (1) considerable congestion in the intertubular tissue, (2) occasional fluid exudation into the Bowman's space of the glomeruli. A slight degree of tubular cloudy swelling is present.

**Liver** large areas of liver degeneration and vacuolization (hydropic degeneration).

**Spleen** somewhat larger and softer, showed marked congestion.

**Lungs** no marked abnormalities.

**Heart** some pallor of muscle fibers is present. There is also a moderate degree of fragmentation. The vessels appear congested.

The different organs were examined as to their sulfapyridine content. The result is shown in Table 2. Most of the sulfapyridine was found in the kidneys (194.0 mg per 100 Gm of organ) in both the free and combined forms. The liver also showed a considerable amount (17.26 in combination and 5.84 in the free form).

The toxic effects in human beings can be summarized as follows:

**CHART 3** In this group new foci and effusions complicated the picture. O stands for development of new foci, ● for accumulation of fluid in the chest.

**Toxic Effects**—We gave toxic doses of sulfapyridine to 15 mice, and vomiting, muscular twitching, tremor, and finally cessation of respiration were observed between May 3 and June 1, 1939, 142.6 Gm of sulfapyridine was given orally in a tragacanth emulsion (Table 1) to a rabbit of 5,900 Gm. Toxic effects observed were restlessness, tremor, and increase in temperature. On June 6, 1939, the rabbit was chloroformed. Autopsy:

1 Effects on the stomach which were mostly of central and only rarely of local origin were evidenced by nausea and vomiting, this occurred in about one-half of the cases. Its occurrence can be diminished if the drug is given on a full stomach or with small doses of barbiturates.

2 Effect on the kidney, resulting in calculus formation by the acetylated sulfapyridine crystals. Depression of kidney functions is fairly common. We noted them in 12 cases. Since the kidneys of old patients are often affected, we checked up the blood chemistry and urinary signs in almost every case and often found higher NPN and urea nitrogen values which usually came down to normal after recovery. In 2 cases hematuria was noticed with albuminuria and casts and without any change in the blood picture, in both cases an increase in the urea N value was present. Both of these hemorrhagic nephritises cleared up after termination of the treatment.

3 Effect on hemopoietic system. Accompanying graphs show many instances of abnormally high white cell counts and then radical reductions. This was only partly due to the different states of the disease and partly to the stimulative and toxic effect of the drug on the bone marrow. Case 41 in Group 2 is illustrative of this. We saw 3 cases where milder hemolytic anemia with hematuria and low erythrocyte and hemoglobin values was noted. Sometimes the hemolysis is not of such a degree as to cause hematuria and it is revealed only by increased urobilinogen in the urine and the feces. In a few cases cyanosis was noted following the drug treatment. It was partly due to the cardiac condition and partly to the pneumonia itself, but it was never as serious as in the sulfanilamide treated cases, oxygen usually helped. One of the cases who received 34 Gm of sulfapyridine showed an interesting feature in the behavior of the white and red cells. The wbc went from 8,900 to 10,800-10,000-11,800-19,600-54,900 and the differential showed increasing number of immature cells. From one to as many as

thirty-two normoblasts were present. Then megaloblasts began to appear. There was a great deal of polychromia and anisocytosis. This blood picture evidently was a result of abnormal irritation of both the leukopoietic and erythropoietic systems by the sulfapyridine. The patient died six days after admission with signs of cardiac failure. No postmortem was done.

4 Toxic effect on the nervous system manifested itself by increased mental restlessness and irritability followed by twitching and increased mechanical irritation of the muscles. In more pronounced cases muscular tremors were noted. The so-called drug fever which is due to irritation of the thermoregulating centers belong to this group. We noted these effects in 3 cases. After discontinuing the drug these symptoms subsided.

5 Skin rashes similar to the salicylate exanthemata were also reported. Its occurrence is rare, we saw it once in its milder form.

From the point of toxic effect one of the cases (Case 74) which came to autopsy is of interest. The patient improved after the use of sulfapyridine and had no temperature for two days. When the sulfapyridine was stopped the temperature rose again to 101 F and kept on rising although sulfapyridine was resumed. He received altogether 34 Gm and his blood level was 5.8, 7.6, 6.9 mg. The patient died with pulmonary edema, due to the cardiac condition. The autopsy showed resolving pneumonia and a fatty degeneration of the parenchymatous organs. How much of that was due to the pneumonia and how much to the toxic effect of the sulfapyridine could not be determined.

*Sulfapyridine vs Serum Treatment*—The vital question confronting the medical public is whether sulfapyridine will be able to replace serum therapy or whether the two should be used together. Our series cannot answer this question since serum was given only in a few cases. From hospitals where younger groups are treated, comparative studies were pub-

lished on this point. Nevertheless, if one considers the severe strain of serum therapy in an old individual it seems justified to say that in old age pneumonia sulfapyridine has a wider field of application than serum therapy.

*Analysis of the Fatal Cases*—As it was mentioned before, out of the 81 cases, 19 patients died and 62 recovered, which would make a case fatality rate of 23.5 per cent. These results seem to be unsatisfactory when compared with those obtained in younger age groups. But it has to be considered that almost all of these patients had some cardiovascular disease, that the previous death rate in this age group used to be 75 per cent, and furthermore, that there was no selection of the cases and patients who seemed to be bad risks from the start were also included.

It has to be pointed out that at least 3 of the cases had a very bad cardiac status on admission and 2 of them seemed to have a marked improvement in the lung condition after the use of sulfapyridine but a few days later they died of cardiac failure, postmortem examination showed that the pneumonia was resolving and that the cause of death was cardiac failure.

## Discussion

All the authors agree on the beneficial effect of sulfapyridine in pneumonia, nevertheless, their opinions clash as to how this action is brought about. The different theories propounded are (1) that it acts bacteriostatically, (2) that it stimulates the specific and nonspecific body defenses, (3) that it is a germicide, (4) that it decapsulates the bacteria (this theory is generally discarded), and (5) that it acts through neutralization of some metabolic activity of bacteria through some enzyme.

There are indications that the polysaccharides liberated through the action of sulfapyridine play a role in the effect. That the polysaccharides are very potent antigens was proved by several investigators and also in our laboratory. They act as sensitizing agents and as such stimu-

late the antibody production. At the same time the initially liberated smaller amounts of polysaccharide protect from toxic effect of the large amounts liberated later. Postmortem findings have also shown that the drug has a stimulative (and in toxic doses deleterious) effect on the reticulo-endothelial system shown by changes especially in the bone marrow, liver, spleen, and lymph glands. This also may have a part in the beneficial as well as toxic effect when sulfapyridine is used therapeutically.

## Summary

1 A report of the value of sulfapyridine in the treatment of old age pneumonia is given.

2 The reduction in the case fatality rate from an average of 75 per cent to 23.5 per cent is noted.

3 In this series not only the fatality rate was reduced but also the duration of the fever from an average of twelve days to an average of seventy-two hours.

4 Analysis of the fatal cases, of the toxic symptoms, and of the mode of action of sulfapyridine is given.

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# THE MANAGEMENT OF COMPLICATIONS ARISING DURING CYCLOPROPANE ANESTHESIA

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CYCLOPROPANE first came into clinical use in 1933, and since then it has been administered many thousand times by hundreds of anesthetists and with varying degrees of satisfaction. I have been asked to speak about the management of complications arising during or after cyclopropane anesthesia. Before I attempt to deal with this subject I believe I should try, in the legal sense of the term, to "qualify" myself as an expert witness. So with no intention of boasting but merely as a statement of fact, I wish to record a series of somewhat more than five thousand personal administrations of cyclopropane since October, 1933, with no death on the table, and no postoperative death which could be related to the anesthetic. This complete absence of mortality is to some extent merely good luck, because patients will die suddenly sometimes whether under anesthesia or not, and regardless of who may be caring for them. During the past five years in the hospital with which I am connected there have been 5 anesthetic deaths, but it happens that in each case some anesthetic other than cyclopropane was in use—one was with chloroform, one with ether, one with avertin, one with intravenous evipal, and one under spinal novocain. Because of these accidents I do not condemn these agents, nor do I uphold cyclopropane merely because of an absence of mortality. I do feel, however, that our record refutes the argument that cyclopropane is too dangerous a drug for use as an anesthetic agent. We have not picked our best risk cases for cyclopropane but have found it so satisfactory for so many types of operations, that during the past year 97 per cent of all my own anesthetics have been with

cyclopropane. Our 5,000 cases include 2,256 abdominal operations, of which 340 were in the upper abdomen. There were 1,567 cases in which an endotracheal tube was used, 850 of these being tonsillectomies in both children and adults. There were 528 for obstetrical deliveries, of which 201 were cesarean sections. The patients have been of all ages from six days to ninety years, and included in the series are many patients with heart disease and acute or chronic respiratory infections. It is inevitable that in such a large number of cases complications should have arisen, and it is about some of these complications and their management that I wish to speak.

*Respiratory Depression*—A difficulty which I have experienced during cyclopropane anesthesia is a tendency in some patients to depression or temporary cessation of respiration. This is most frequently seen in patients who are somewhat resistant of the anesthetic and to whom the anesthetist is giving a high concentration of cyclopropane. The patient may suddenly become deeply anesthetized and stop breathing. The treatment here is obviously to give more oxygen, to give it quickly, and in an effective manner. It is usually necessary only to dilute the mixture in the breathing bag with oxygen and to use a little manual pressure on the bag to re-establish respiration, but in some cases on account of an obstructed airway this is ineffective, so an endotracheal tube should be introduced quickly in order to get oxygen into the lungs before the asphyxia becomes serious enough to affect the heart. I cannot speak too strongly of the life-saving value of endotracheal oxygen in all forms of respiratory depression during

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anesthesia, and I feel that it is a primary duty of everyone who calls himself an anesthetist to become expert in the introduction of endotracheal tubes. There is only one way to become efficient in this not too difficult technic, and that is to practice at every possible opportunity. In order to practice intubation one should have laryngoscope and tubes at hand at all times in the operating room, and frequently insert a tube during or after an operation. This can be done carefully without damage to the patient, and avoids the danger of a failure at a critical moment by one who has had no experience except during the excitement of a crisis. As to methods of intubation, my personal preference is for a semirigid French silk catheter introduced through the mouth with a Guedel or other type of direct laryngoscope. Magill's method of blind nasal intubation with soft rubber tube is useful for normal anesthesia, but it is not always effective as a resuscitative measure in an emergency, and the anesthetist who is not accustomed to using a laryngoscope is then at a great disadvantage. *The most important single piece of advice for anesthetists contemplating the use of cyclopropane is to practice endotracheal intubation.*

With cyclopropane as with other anesthetic agents the maintenance of a free airway is a fundamental necessity. When there is obstruction to breathing from a tongue that is hard to control, the rubber Guedel airway may be introduced, or better still the "pharyngeal bulb gasway" designed by Dr. Beverley Leech. I have used this simple device in hundreds of cases with great satisfaction, and it allows also the use of cyclopropane by closed circuit for teeth extractions and other operations where a mask would be in the way. Spasm of the larynx, with a resulting "crowing" type of obstructed breathing is occasionally observed, especially in patients who are resistant to anesthesia. This is not usually a serious sign, and may be relieved by diluting the patients' atmosphere with oxygen or helium. I have kept a cylinder of helium on our gas machines for several years, and

I am of the opinion that it has definite value in relieving certain types of obstructed breathing in patients under anesthesia. However, none of these measures takes the place of oxygen by endotracheal tube in real cases of respiratory obstruction or asphyxia.

*Pulmonary Atelectasis*—Burford<sup>1</sup> has described several fatal cases of massive collapse of the lungs during or immediately after cyclopropane anesthesia, and he has suggested that these and also commoner and milder cases of postoperative atelectasis may be due to the rich oxygen atmosphere and shallow respiration which are usually associated with cyclopropane anesthesia. This hypothesis is interesting but I cannot subscribe to it as the sole or even the principal cause of atelectasis for the simple reason that in all our 5,000 cases of cyclopropane anesthesia we have had no single case of serious collapse, and the incidence of the milder forms of partial atelectasis is less than it used to be following ether or ethylene or nitrous oxide and ether. I believe, however, that the introduction of air into the anesthetic atmosphere is a good practice, and I am impressed by the simple device of a sphygmomanometer bulb attached to the breathing bag for this purpose as described by Colby.<sup>2</sup>

I believe that the factors which prevent atelectasis are (a) open airways during and after anesthesia, (b) nonirritating anesthetic, and (c) adequate use of pharyngeal and tracheal suction after anesthesia.

If these factors are properly attended to one need not worry about the absorbability of the anesthetic atmosphere. Mild cases of atelectasis have occurred in our experience following cyclopropane but the symptoms have developed from one to six days after the anesthetic and could not possibly be due at that time to pockets of cyclopropane remaining in the patient's lungs. I have a theory, shared by Leech, of Regina (who has had a wide experience with cyclopropane) and probably also by others, that cyclopropane anesthesia is better without the addition of ether, vinethene, chloroform, or other

volatile agents In our experience the addition of ether causes increased secretion and obstructed air passages, and does not improve muscular relaxation The objection will be raised that one needs ether to secure relaxation for upper abdominal surgery Our answer is that in our hospitals (Regina General Hospital and Homeopathic Hospital of Montreal) for the past three years we have never added ether to any cyclopropane anesthetic in order to secure better relaxation, and we believe that cyclopropane alone will give as good relaxation in any patient as will ether We admit that it is difficult to secure good relaxation in a few patients, but if cyclopropane will not do it, neither will ether The cases of fatal pulmonary collapse which I have read about have all been cases in which some ether was added to the cyclopropane Is it not possible that ether irritation played some part in the bronchial obstruction which must have preceded the collapse?

The other measure which I believe to be of great importance in the prevention of atelectasis is the proper use of suction It is our practice to introduce a small fenestrated rubber catheter with suction into the mouth of every patient after anesthesia, and to pass this catheter down the trachea if there is any evidence of obstructing bronchial mucus This is not traumatic, can do no harm, and I am sure has been the means of saving us much postoperative trouble Suction in all our operating rooms is by water suction pumps such as are in common use in laboratories and which can be easily connected to the existing plumbing at very little expense I don't believe enough emphasis has been placed upon the value of suction in the armamentarium of the anesthetist

*Acute Pulmonary Edema*—I have reported elsewhere<sup>3</sup> a case of acute edema of the lungs occurring in an apparently healthy adult patient during the course of cyclopropane anesthesia for a herniotomy The patient became cyanosed and it was found that the bronchi and trachea were filled with a large quantity of frothy

serosanguineous fluid An endotracheal tube was introduced at once and a large amount of this fluid removed by suction, then endotracheal oxygen was administered and the patient suffered no serious after-effects Dr Kenneth Heard, of Toronto, has told me that he recently had a similar case which he treated in the same manner, and with equal success

I wish to record in more detail another case of acute pulmonary edema. An apparently healthy young woman went through a long and difficult labor ending in forceps delivery She was given intermittent nitrous oxide and oxygen for one hour before delivery, then was anesthetized with cyclopropane for the actual delivery and repair, a period of about half an hour During the cyclopropane anesthesia there was some trouble with mucus and the patient vomited fluids, but the condition was not regarded as unusual, and she was sent back to her room conscious, with a good color and a normal pulse rate One hour later she suddenly developed dyspnea and became cyanosed Oxygen was administered by mask without relief I was called and found her semiconscious, with shallow rapid respiration, an extremely rapid feeble pulse and with many coarse rales throughout her chest We made a tentative diagnosis of acute pulmonary edema, although she was not at that time spitting up any mucus, and in spite of her extremely serious condition I anesthetized her again with cyclopropane in order to introduce into her trachea a soft rubber suction tube With this we withdrew several ounces of very tenacious mucus, and then kept up oxygen by the nasal catheter method An x-ray of the chest at this time confirmed the diagnosis of widespread pulmonary edema. I was afraid to use suction again down the trachea on account of the extremely weak condition of her heart, so we contented ourselves with sucking from her pharynx what mucus was being coughed up, and continuing the oxygen After three hours she showed some improvement, consciousness returned, and another x-ray showed that the edema was diminishing

Twelve hours later there was evidence of beginning consolidation in both bases, and soon she was again in extremis on account of bilateral bronchopneumonia. I attributed this complication to the very tenacious character of the mucus in her chest in contrast to the thin serous exudate we had seen in other cases of acute pulmonary edema. She was given sulapyridine together with continuous nasal oxygen for eight days. Her respirations continued for days at the unbelievably high rate of sixty to eighty to the minute, but she made a good recovery and was discharged from the hospital perfectly well sixteen days after delivery.

After these experiences I might have believed that there was something peculiar to cyclopropane which tended to induce acute pulmonary edema in a few individuals, if it had not been for an almost identical experience with an obstetrical patient five years ago, when nitrous oxide and ether were used and not cyclopropane. In that case the patient did not develop pneumonia but she went through just the same pulmonary crisis an hour after delivery with a sudden filling of her lungs with frothy mucus. That was in our very early days of the use of cyclopropane and I remember being so thankful at the time that I had not used the new anesthetic in this case, for I never would have been able to convince myself or anyone else that the complication was not due to the "damned new-fangled gas!" We don't yet know what produces these attacks of acute pulmonary edema, but we do feel very strongly that immediate suction plus adequate oxygen is the proper treatment.

*Cardiac Irregularities*—In the reports on cyclopropane anesthesia, from both the laboratory and clinical points of view, there has been frequent mention of cardiac irregularity. I noted this effect in the sixth patient to whom I administered cyclopropane, and I have observed it in numerous patients since, but I can truthfully say that I have never seen any permanent or harmful result from the arrhythmia. I do not understand the underlying mechanism of these irregulari-

ties and I do not believe anyone else does in spite of extensive experimental and electrocardiographic studies, but I am going to be rash enough to say that from the clinical point of view, cardiac irregularities occurring in the human heart under surgical cyclopropane anesthesia may be disregarded. It is true that Meek<sup>4</sup> and others have pointed out to us the effect of cyclopropane on the automaticity of dogs' hearts, and have produced experimentally ventricular tachycardias which make the animals liable to the onset of ventricular fibrillation by the addition of adrenalin. Also, they have suggested that a similar condition might possibly be produced in the human heart. However, the clinical situation is simply this—hundreds of careful anesthetists have administered cyclopropane to many thousand patients and no one has recorded any permanently damaging effect on the heart. Patients will die of heart disease at times under cyclopropane anesthesia, just as they die in their beds or on the street, but my own feeling is that cyclopropane is the safest anesthetic agent we have at present for patients with heart disease who require major surgical operations. In view of this clinical evidence, to say that we should not use cyclopropane because it is too dangerous for the heart is, in my opinion, perfect nonsense.

*Postanesthetic Encephalopathy*—Gebauer and Coleman<sup>6</sup> have reported a case of so-called "post anesthetic encephalopathy" following cyclopropane, where at autopsy the brain showed evidence of severe degenerative changes. They believe that this condition might result from a localized cerebral anoxemia without any clinical evidence of cyanosis during the anesthesia. There are so many variable factors in different patients, that we must admit that anything is possible, but at least we may comfort ourselves that such a complication is extremely rare. I have had no such case in my experience.

*Postoperative Shock*—When we are confronted with circulatory shock following a major operation it is often hard to

decide how much of it is due to the surgery and how much to the anesthetic—it depends, perhaps, on whether one is a surgeon or an anesthetist. In any case, patients who have had cyclopropane anesthesia for any extensive abdominal operation or for some other type of operation in which there has been severe blood loss, do sometimes show evidence of more or less serious shock, and the anesthetist may be called upon to assist in supportive treatment. I have found that coramine in doses of at least 5 cc hypodermatically is a useful stimulant and that oxygen is of value, but that our principal dependence should be upon intravenous injections of glucose saline, or early blood transfusions. The relative infrequency of serious shock, vomiting, or abdominal distention after cyclopropane anesthesia is indicated by a study recently made of 300 of our cases of cesarean section. In the 200 cyclopropane cases there was nausea and vomiting in only 5 per cent, and severe distention in only 2 per cent.

With reference to the use of cyclopropane in obstetrics, I have been told that some obstetricians and pediatricians have suggested a possible harmful effect on the baby. When we published our original report<sup>6</sup> on cyclopropane for cesarean section it never occurred to us to give statistics on this aspect of the subject, as we had never seen any such harmful effect. However, I have examined the records of our last 100 cases, and find that 5 babies did not live, of these, 4 were either too premature to be viable or were monstrosities. The other baby died when six days old, of peritonitis and pyloric stenosis. It was a small premature baby whose mother had been toxic. The other babies all left the hospital in healthy condition, so I do not see how anyone can logically consider cyclopropane as a factor in infant mortality.

*Increased Bleeding During Operation*—I suppose one should include in a paper such as this the controversial subject of the amount of bleeding during cyclopropane anesthesia. I have seen no convincing reports on this subject from laboratory or experimental workers, since

it is a very difficult question to prove experimentally. I can definitely say, however, from the clinical standpoint, that fear of excessive bleeding need not enter into our estimation of the value of cyclopropane. There is, perhaps, in some patients a slightly increased capillary flow from the superficial tissues while they are being handled, but in my experience this has never led to serious hemorrhage either during or after the operation. The surgeons who use cyclopropane most frequently and like it best, do not complain about bleeding, whereas we sometimes hear remarks about it from new men. Some patients do bleed more readily than others, but these "bleeders" lose as much blood when they are switched to ether as they do with cyclopropane.

### Conclusions

To administer cyclopropane properly, and to avoid and to treat these complications which I have mentioned, the anesthetist must be reasonably intelligent, properly trained, and above all, a qualified physician with the fundamental background of the basic medical sciences which only a physician can possess. I have heard some hospital administrators and some surgeons argue against the use of cyclopropane on the grounds that it is safe only in the hands of experts. Surely it is no valid argument against a useful new anesthetic agent to say that the anesthetists of one's hospital are not qualified to administer a drug which is being used safely in many other hospitals.

The whole subject of the relationship between surgeon, anesthetist, hospital, and patient, and their relative responsibility, has recently been ably reviewed by a learned French Canadian judge in the Superior Court of the Province of Quebec.<sup>7</sup> A few extracts from his remarks while rendering judgment are pertinent to this question. He says in part "The following propositions are established, (a) that the administration of a general anesthetic is a dangerous thing even to the point of possibly causing the death of the person submitted to it,



(b) that during the anesthetic surprises, complications, sudden and unforeseen situations, dangerous to the patient and capable of causing his death, may arise, (c) that with the presence of a physician specializing in anesthesia, and experienced in this branch of medicine, the life of the patient might almost always be saved when a complication arises during the anesthetic

The administration of a general anesthetic is at the same time a science and an art, easy, this science and this art, when all goes well, that is to say when no complication or difficulty arises in the patient, difficult and exacting of skill and experience, when a sudden and dangerous complication arises (these complications vary with the patient and never present exactly the same aspect) being able to cause death very rapidly, if a competent anesthetist, experienced and knowing how to act quickly in this particular complication, is not ready to cope with it with the discretion, the precision, and the ability which can come only from the union of medical science with experience, during the operation the life of the patient rests in the hands of the anesthetist quite as much as in those of the surgeon himself, and any complication resulting from the anesthetic puts the life of the patient in the balance

It follows that one cannot be too careful in the choice of this man

An anesthetic agent is a drug, which shows its action by certain signs and produces definite effects, by these symptoms and these signs one knows what is happening to the patient, and to understand these signs and to judge what may arise, it is necessary to know medicine

A nurse has not the required medical preparation to be able to cope with an accident during anesthesia, the reflexes, the pulse, the breathing, the color of the patient, these are the signs which would speak in a certain way to a specialist in anesthesia, and which by keeping him constantly informed of the condition of the patient, permit him not only to pro-

tect the patient by intervening at a critical moment, but also to foresee and prevent such a critical moment, that which constitutes the value of a medical anesthetist having a knowledge of physiology, is his ability to perceive quickly a sudden complication which may arise, to act quickly, to do what should be done and nothing else

The claim of the defendants that, during the operation to guard against and to cope with anesthetic complications the patient has at the same time the anesthetist and the surgeon is not admissible, the surgeon cannot and should not supervise the anesthesia, that is not his business, all his attention and his faculties should be concentrated on the operation itself, which he should execute diligently, carefully, and without the preoccupation of accessory or extraneous things, the anesthetist is, therefore, the only person who watches actually and completely the patient, he being ready to deal with complications which may arise with the anesthetic, when a critical situation does arise the surgeon, who should then suspend the operation, comes to assist the anesthetist, but it is still the latter who remains always the person in charge of the security of the patient "

In conclusion I would like to say simply that I believe cyclopropane to be the best and most widely applicable general anesthetic agent which we have available at the present time, and that the complications and dangers attendant upon its use should not frighten any experienced medical anesthetist

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It is announced that 7,518,425 persons visited the medical exhibit at the World's Fair last sum-

mer, approximately 30 per cent of the total Fair attendance

# Case Reports

## HYPERSENSITIVITY TO RABIES VACCINE

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**R**EPORTS on complications due to the administration of rabies vaccine (Semple)\* are infrequent and usually limited to discussions of paralysis. Many types have been noted,<sup>1,2,3</sup> viz., a Landry's type of ascending paralysis, a subacute form corresponding to a myelitis type, a mild neuritic form especially striking the facial muscles, sphincteric disorders, and polyneuritic manifestations. These paralyzes have been considered by some authorities as cases of modified rabies, others have tried in vain to find the lesions of rabies on autopsy and have likewise been unsuccessful in trying to reproduce the lesion by injection of the brain substance into another animal.<sup>4</sup> Stuart and Krikorian thought that these paralytic accidents were specific anaphylactic responses to the cord or brain substance used in the vaccine and felt that further refinement of the material would remove the dangerous elements.<sup>4</sup> They describe 1 case in which the anaphylactic character of the reaction is evident.

A 5-year-old Palestinian Jewish girl, who was previously exposed to rabies and had received ten injections without ill effect, was scratched by a cat. Antirabic treatment was given for 10 days, the following day she did not feel well and two days later she showed some weakness in her legs. On the third day following the cessation of treatment, urticaria was present near the sites of injection, vomiting occurred, and the patient was unable to stand erect. Examination was entirely negative, except for the urticaria. On the fifth day the urticaria became more severe, as did the ataxia. On the seventh day the symptoms began to wear off gradually and one month later she was entirely symptom free.<sup>4</sup>

Rosenau described a flaring-up of the sites of injection during the course of treatment and felt that they represented a phase of hypersensitivity. The same author feels that the paralytic manifestations may be due to a form of anaphylaxis rather than to an untoward complication of treatment.<sup>6</sup>

The following observation is presented as a case of undoubted sensitivity to the vaccine.

In 1931, W. D. was a medical student. His past history was entirely negative except for a proved sensitivity to rabbit dander. This sensitivity had been demonstrated by his inability to do any laboratory work with rabbits, for in a short time marked ocular and nasal symptoms

would occur. His family history was negative, except for the presence of hay fever in his sister. He was exposed to a rabid dog in his home. There was no actual bite, but realizing the possibilities of infection through hangnails and cracks in the skin<sup>7</sup> (since he had examined the dog during its illness), he thought it wise to take the prophylactic injections. Knowledge of his sensitivity to rabbit dander, and the realization that the Semple vaccine was made from the spinal cord of a similar animal, made him hesitant as to the advisability of taking the treatment. His theoretical ramblings, however, were stilled by the "sober" judgment of others. A skin test was done with 2 minims of the vaccine the injection being made intracutaneously in the abdominal wall. A markedly positive wheal did not deter the overzealous vaccinator, and 2 cc of the vaccine was injected subcutaneously into the abdominal wall. Twenty minutes later at home, the student noted the onset of dizziness and a feeling that "all was not well." Exposure of the site of injection revealed a rapidly increasing red wheal with marked pseudopodial reaction and radiating redness to the axilla. Within ten minutes there was syncope, from which the patient was easily aroused, but it soon recurred. There was marked pallor, a generalized urticaria and slight but definite difficulty in swallowing. A physician was hastily summoned, but the patient recovered before his arrival. Adrenalin was administered and the subsequent course was uneventful.

It is of interest to note that during the student's undergraduate days (when one's idea of humor can reach limitless bounds), he had carried a rabbit's foot in his vestpocket for a period of a few months during his course in rabbit dissection. It is recalled that this foot was rubbed vigorously before examinations and passed around ceremoniously. The actual routine is vague, but it is quite possible that some nose rubbing ritual may have been involved. In this light, it is interesting to speculate as to the possibility of the acquisition of sensitivity through this method. Guinea pigs have been sensitized by direct inhalation of antigenic dust, and then killed by administration of the same antigen through inoculation.<sup>7</sup> In humans it has been shown by Figley and Elrod that castor bean dust emitted by a castor oil factory, was the direct cause of many asthma cases in the vicinity of the factory.<sup>8</sup> In a study of rabbit hair asthma, Ratner reviewed the case of a child with asthma in which the only clue lay in the fact that the child's father worked in a felt hat factory. On further investigation it was found that felt is made from rabbit hair. In the process of his work, particles gathered on his clothing and person. The child reacted positively to a skin test done with dust from the cuff of the father's trousers.<sup>9</sup>

This case serves as an example of the possible danger from use of rabies vaccine without

\* Semple vaccine is a sterile 4 per cent emulsion of killed rabies fixed virus (carbolyzed) obtained from the spinal cord of rabbits inoculated intracerebrally with the virus.

proper inquiry into the presence of a hypersensitivity state (and its proper interpretation) Patients about to receive inoculations, should be skin tested, as is done with horse serum injections In view of the interest displayed in the use of antipneumococcic rabbit serum in lobar pneumonia because of the decreased liability to serum reactions,<sup>10</sup> the possibility of sensitivity to rabbit serum should be kept in mind

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## CANCER DEVELOPING IN THE HERNIATED PORTION OF THE STOMACH

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JACOBS<sup>1</sup> has recently described a case of cancer developing in the herniated part of the stomach. He was unable to find more than seven other reports, all of which appeared in European journals. The following case is reported for this reason and because it presents the dangers of aspiration pneumonia.

A business executive, aged 74, of German ancestry, came on August 20, 1934, complaining of dysphagia and substernal and epigastric distress during the past two months. In this time he had lost 12 pounds in weight. There was no real pain, only a sense of distress from pressure, usually within two hours after eating. Lying down after a large meal sometimes caused acid regurgitation, but no vomiting.

He had had no other symptoms of relevance in the past. There had been no surgical operations or injuries. The family history was negative.

The essential findings on physical examination were few. He did not appear ill except for some evident loss of subcutaneous fat. The lungs were normal. The heart was slightly enlarged to the left, the superficial arteries thick and beaded. The blood pressure was 105/85. Abdominal examination was negative save for bilateral inguinal hernia. The reflexes were normal. Rectal examination was negative. His weight was 159 pounds.

X-ray study showed, by fluoroscopy, a distortion of the barium stream in the lower third of the chest. Films of this area demonstrated an irregular outline of the terminal esophagus and the upper part of a herniated cardiac end of the stomach. The rest of the gastrointestinal tract was normal.

A stomach tube, passed gently, met with resistance at the 30 cm. mark. When withdrawn the tip was covered with bright red blood and mucus. No free hydrochloric acid was present in the washings of the tube. The urine examination was negative. Blood count gave values of 13 Gm. of hemoglobin and 4,380,000 erythrocytes.

Believing we were dealing with a malignant lesion of the esophagus, secondarily involving the cardia, an esophagoscopy was arranged with Dr. Chevalier Jackson. However, he reported "extensive ulcerative esophagitis, ulcer of the herniated portion of the stomach, transhiatal gastric hernia, peptic esophagitis, chronic gastritis. Other lesions not excluded." Tissue removed for biopsy showed "fragments of mucous membrane bearing resemblance to gastric mucosa. The superficial layers are the seat of hemorrhage, focal necrosis, and mononuclear infiltration. In a few areas, polymorphonuclear leukocytes are seen. Diagnosis: ulcerative esophagitis (F. W. Konzelmann)."

On an ulcer plan the patient gained weight but there was no change in the symptomatology, although at no time in his illness did the gastric symptoms become distressing. A mild anemia was helped somewhat by many small transfusions over the next few months. Suddenly on November 24, 1934, he awoke from a sound sleep at 2:00 A.M. choking. He told his family that his stomach had backed up. There was a severe paroxysmal cough, producing greenish yellow, thick sputum. By morning, the fever had risen to 101° F. with a pulse of 120, and there were signs of consolidation at the right lung base with many rhonchi in both lungs. Within forty-eight hours the patient was out of bed and his cough was decreasingly productive. On close questioning, the patient admitted that for some time, on lying flat in bed, he had had gushes of regurgitated fluid. He had resorted to the use of three pillows. Believing that he had had an aspiration pneumonia, or pneumonitis, from the regurgitation of the stomach contents, while asleep, we elevated the head of the bed by blocks.

Despite this setback the patient went to Florida for the winter and came back in March, 1935, looking well, but films showed more stenosis. The anemia persisted. He had maintained his gain in weight. A second esophagoscopy was done later in the year by Dr. Jackson. The report, dated December 5, 1935, read as follows: "There is a cancer developing in the herniated stomach."

and it is bleeding freely. This was not present when we examined the patient in August, 1934. The other lesions noted in the previous report one year and four months ago are still present. Histologic diagnosis (from biopsy) carcinoma—grade 4."

A course of x-ray therapy was given by Dr. Herendeen at the Memorial Hospital. X-ray films showed no improvement. The patient seemed even worse, clinically. In February, 1936, he had a second pulmonary attack lasting four days. The signs of consolidation were in the left lung base this time. Two further episodes of precisely similar nature occurred in March and May. He made a good recovery from each and with continued transfusions and soft frequent feedings, his blood count at the end of May, 1936, registered 16 Gm hemoglobin and 4,950,000 erythrocytes. His weight at this time was 165 pounds.

In the late summer of 1936 evidence of spinal metastases appeared as a left "sciatica." Films showed a destructive process in the lower lumbar spine. He became progressively weaker and died in the New York Hospital on November 15, 1936, about two and one-half years after the onset of symptoms. At no time did he have much substernal pain, nor did he develop an obstruction. Permission for autopsy was not obtained.

#### Comment

The extreme rarity of such cases must be more apparent than real. Chevalier Jackson<sup>2</sup> says "we have seen a few cases in which carcinoma developed in a herniated portion of the stomach, but the proportion is so small that we would not feel justified in saying that the hernia and its secondary pathology were causative factors in starting a malignant process." These cases have not yet been reported according to a private communication from Dr. Chevalier L. Jackson, although he referred to them in a recent talk:

Careful review of cases classed as carcinoma of the terminal esophagus would no doubt show that some were really cancers of the herniated portion of the stomach. With the development of the gastroscope, more interest has been centered on direct visualization of these lesions. (It should be remarked that the closed tube is contraindicated in stenotic lesions near the cardia, and that the Wolff-Schindler gastroscope could not have been used in this case.)

According to Welch's figures,<sup>4</sup> cancer of the cardiac end of the stomach comprises but 8 per cent of all gastric cancers. Since diaphragmatic hernia is not common, the association of cancer of the cardia and a hiatus hernia will readily be seen to be extremely rare, on the basis of probability.

Speculation will arise as to whether the lesion was a cancer developing in a peptic ulcer. It is interesting that in August, 1934, there was ex-



FIG 1 Cancer of the herniated portion of the stomach

tensive ulceration, gastritis, and stenosis, without evidence of gross carcinoma on direct visualization by a most experienced observer. Furthermore, the biopsy at this time showed no cancer cells. On the other hand, the short history, loss of weight, and anemia already present in August, 1934, are strongly suggestive of neoplasm.

#### Summary

1 A case of carcinoma developing in the ulcerated herniated portion of the stomach is described.

2 The location and nature of these lesions must be made by endoscopy as well as by x-ray studies of the patients.

3 The patient developed aspiration pneumonia on four different occasions.

115 East 61st Street

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## CASE OF VENTRICULAR FIBRILLATION FOLLOWING ACUTE CORONARY OCCLUSION

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**T**HAT ventricular fibrillation may follow acute closure of a coronary artery was shown experimentally by Cohnheim and Schulthus-Rechberg<sup>1</sup> as long ago as 1881 and by Porter<sup>2</sup> in 1894. Wood and Wolferth<sup>3</sup> found this disturbance to be the most usual terminal event in experimentation and occurred most frequently when the left posterior circumflex coronary branch was occluded. Harris and Hussey<sup>4</sup> observed that 15 dogs out of 50 developed ventricular fibrillation within ten minutes after ligation of the anterior descending branch of the left coronary and suspected the condition to be the cause of death in 18 other dogs that died suddenly between three and twenty-four hours after such ligation.

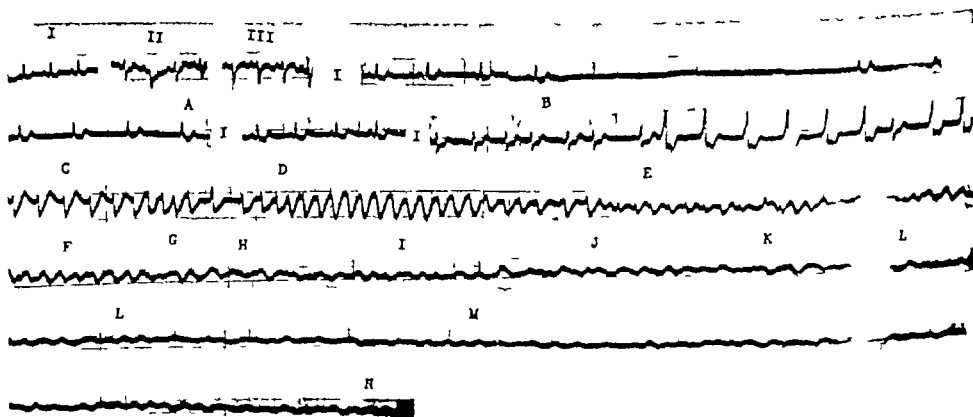
In spite of the frequency of reported observations of ventricular fibrillation in experimental coronary occlusion, there are no reports of clinical cases of this disturbance following occlusion. There are many inferences in the literature that this condition may be the cause of death from occlusion but no actual proved case. For this reason the following case report is of interest.

### Case Report

J C, male, 48 years old, mechanic, was seen on October 8, 1936. His father died at 75 years of age from arteriosclerotic heart disease. His mother died at 76 years of age from carcinoma of the esophagus. One brother died at the age of 17 years from typhoid and one sister at 55 from a tumor of the brain. Three brothers and one sister were living and well. The patient's habits were normal, except for constipation. He had been married nineteen years and had one child who was living and well. He had never had any serious illness except for influenza in 1918 when he was compelled to stay in bed three weeks.

On October 8, 1936, he was awakened in the middle of the night by excruciating retrosternal pain radiating to both arms, associated with cold sweat, collapse, vomiting, and air hunger. A total of 1 1/4 gr of morphine had to be given within two and one-half hours to afford relief.

The physical examination revealed a well developed male in a moribund state. His skin was then ashen, cold, and clammy. The respiration was shallow. The heart was slightly enlarged, sounds hardly audible, and the rate could not be determined. The pulse was imperceptible and no blood pressure readings could be obtained. There was some pulmonary edema. He finally sank into deep coma, breathing became labored



- A—Three standard leads, 2 1/2 hours after onset, regular sinus rhythm, rate 136  
 B—First lead 2 hours, 45 minutes, sinus slowing, rate 77, sino auricular standstill and nodal escape  
 C—Nodal rhythm, rate 71  
 D—3 hours, 15 minutes, return to sinus rhythm, rate 94  
 E—3 hours, 20 minutes, irregular nodal rhythm interrupted by supraventricular impulses with different spread  
 F—3 hours, 48 minutes, short period of ventricular tachycardia, rate 150  
 G—Irregular oscillations, rate 255  
 H—Four supraventricular impulses  
 I—Short oscillatory period, rate 256  
 J—Short period resembling H  
 K, L, M, N—Continuous undulatory movement, unequal in voltage and appearance, rates progressively diminishing from 221 to 183, 164 and 140, respectively

and slow, and he died three and one-half hours after the onset of the attack. The diagnosis was acute coronary occlusion.

**Electrocardiogram**—Fig 3A is a portion of the three leads two and one-half hours after the onset. The rhythm is of sinus origin, rate 136 per minute and the PR and QRS conduction time are normal. There is left axis deviation. The QRS complexes are of low voltage with depression and rounding of the R-T segment in the first lead, depression of the S-T segment in the second lead, and elevation and rounding of the S-T segment in the third lead. The T waves are of low voltage, and are positive in the first and second leads and negative in the third lead. All subsequent tracings were taken in the first lead.

Fifteen minutes later, Fig 3B, the rate is 77 per minute and sino-auricular block developed. Nodal escape occurs after about five seconds, which is followed by nodal rhythm at a rate at first of 54 per minute, seen in 3B and later 71 per minute, seen in 3C. In forty-five minutes, Fig 3D, there is a return of a regular sinus mechanism with a rate 94 per minute. In fifty minutes, Fig E, nodal rhythm set in again with irregular impulse formation, at a rate of about 112 per minute, followed by a group of complexes with different spread along the bundle branches occasionally interrupted by an impulse of the usual type.

Fifty-eight minutes after the electrocardiographic tracings were begun, continuing for two minutes, including one-half minute after the last breath was taken, a continuous tracing was obtained, part of which is shown in Fig 3F to N. It begins with paroxysmal ventricular tachycardia at a rate of 150 per minute. This is followed by 4 ventricular oscillations, Fig 3G, at a rate of 255 per minute, and then 4 impulses, Fig 3H, resembling somewhat those seen in Fig 3E. This is continued by a short period of oscillations, Fig 3I, at a rate of about 256 per minute which is again interrupted by 5 impulses, Fig 3J, resembling slightly those of Fig 3H. From this point on there are continuous undula-

tions of unequal appearance and voltage. The undulations gradually and progressively slow in rate, increase in length, and diminish in voltage, and there is a marked tendency to partial superimposition. With the higher rates, as in Fig 3K and L where it is 215 per minute, the duration of each complete cycle is approximately 0.27 seconds, and bears a proportional relationship to the whole rate. As the rate slows, the subdivision becomes progressively more unequal.

## Summary

A case of acute coronary occlusion is reported with ventricular fibrillation as a terminal event occurring about 3½ hours after the onset of the attack. This appears to be the first reported clinical case of ventricular fibrillation following acute coronary occlusion. Preceding the onset of ventricular fibrillation there were intermittent changes from regular sinus rhythm to sino-auricular standstill, ventricular escape and the development of nodal rhythm, a very brief period of ventricular tachycardia, and finally ventricular fibrillation. The highest rate was about 256 per minute and diminished in voltage at termination. The rate in this case was much lower than in cases of transient recurring ventricular fibrillation reported elsewhere.<sup>5,6</sup>

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## APPENDICEAL METASTASIS IN CARCINOMA OF BREAST

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**S**ECONDARY involvement of the vermiform appendix from malignant foci elsewhere in the body would not seem an exceedingly rare occurrence. However, careful search through all available standard surgical and pathologic texts as well as the periodical literature of the past three decades reveals, with the two minor exceptions noted below, almost no mention of the condition. A recently published monograph<sup>1</sup> on metastatic lesions refers to only a single reported instance<sup>2</sup> in a case of extremely generalized carcinomatosis originating in a scirrhous primary carcinoma of the left breast. Here metastases, uniformly described as "secondary,

solid, rarely tubular scirrhous carcinoma" were reported in axillary, cervical, esophageal, gastric, coeliac, lumbar, and mesenteric lymph glands, subperitoneally in Douglas' pouch, of miliary nature in the pericardium, in liver, spleen, adrenals, and right ovary, femur, sternum, ribs, lumbar spine, and multiple likewise in the gastrointestinal tract as submucous gastric infiltration, as submucous nodules scattered through jejunum, more numerous in the lower ileum, and as several submucous secondaries in the appendix.

However, in a short treatise on tumor pathology<sup>3</sup> an additional instance was discovered in

an illustration given—no text discussion but described in a brief subtended legend—as a cross section of an appendix showing malignant invasion of its wall from serous coat inward in a case of generalized peritoneal carcinomatous dissemination secondary to a gastric adenocarcinoma. Infiltration was mainly serosal, involving the outer muscularis to a moderate extent as small isolated solid anaplastic cell groups.

The case herein presented likewise stems from a carcinoma of the left breast, in this instance of duct origin and medullary variety. Metastases however, unlike the 2 cases previously noted were far less extensive and considerable necrosis and radiation changes were present in both primary and several treated secondary lesions. On microscopic examination the characteristic primary and secondary picture was one of a poorly cellular fibrous tissue stroma enclosing masses of neoplastic cells in small solid groups or in pseudoglandular arrangement. Individual cells had poorly defined cell boundaries, a moderate amount of eosinophilic cytoplasm, and pycnotic or vesicular nuclei, the latter with irregular nucleoli. Mitotic figures were infrequent.

#### Case Report

M D Case A-30, B C I, aged 48. Anatomicopathologic diagnosis at postmortem was

- 1 Duct carcinoma of left breast with marked radiation changes, and metastases,
  - A Lymphatic to left axillary, paratracheal, and mediastinal nodes, right and left lungs, tracheal and bronchial walls, parietal pleura and diaphragm
  - B Vascular to scalp, liver, kidneys, adrenals, vermiform appendix, and brain.
- 2 Hypostatic pneumonia, left base. Aortic atherosclerosis. Congenital dilatation of cavum septum pellucidum.

It is noteworthy that careful investigation revealed no other significant pathology of the gastrointestinal tract. The appendix was bound down to the iliac fossa by a peritoneal fold over its anterior surface and measured 12 cm in length, 1 cm distal to the appendiceal base there was a reddish fusiform swelling 2 cm long and 1 cm wide. On section the appendiceal swelling was confined to a uniform increase in thickness of the wall. The lumen was patent, from it several small fecaliths were expressed.

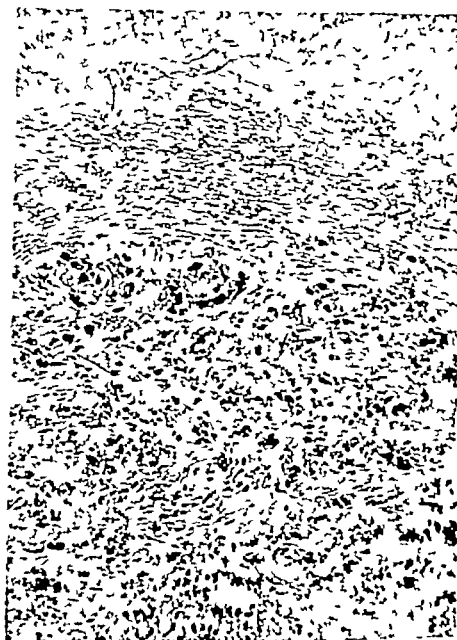


FIG 1

No corresponding ileocecal lymphadenopathy was present. First impression from gross appearances was that the lesion was a coincident carcinoid. However, microscopic examination revealed complete coagulation necrosis of the mucosa with no recognizable residual epithelial or lymphoid elements. Little of the submucosa remained, and this was infiltrated with irregular groups of neoplastic cells, discrete, and with deep staining nuclei, identical with those found in other foci. These extended through the lymphatics of both muscularis and serosa. A scant lymphocytic reaction and occasional small hemorrhages were present in the wall.

#### Conclusion

A case is reported of a pathologic entity receiving, so far as could be discovered, only two previous descriptions, namely, the involvement of the vermiform appendix by carcinoma from a focus of origin elsewhere. The original lesion in two instances was carcinoma of the left mammary gland, and in the other, gastric adenocarcinoma.

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#### TIME FOR MISSIONARY WORK

The seventy-sixth United States Congress is now in session. It is a safe bet that a national health program proposal, or proposals will be considered during the session.

Therefore, urges the *Ohio State Medical Journal*, missionary work should be done by every physician. Representatives in the Congress

should be interviewed by their physician friends and constituents. The view of the medical profession on medical and health legislation should be presented to them. If personal visits with Congressmen cannot be arranged, a letter should be sent. Disposition of pending health legislation in Congress may depend on what is done now.

# Legislative News

## Bulletin No 1

THE Legislature convened on Wednesday, January 3, heard the Governor's message and adjourned until Monday night. In the meantime committees were announced. The personnel of those that we are particularly interested in is included in this bulletin.

Inasmuch as the membership of the two bodies is practically unchanged from last year, there will be no delay required for organization as in previous years and the bills that were introduced were immediately referred to committees for consideration. It is important, therefore, that all of our Legislative Committees begin to function promptly. There still remains a number of Societies which have not given us the names of the legislative chairmen or the members of their committees.

May we suggest that each reader of the bulletin immediately take steps toward reviving an acquaintanceship with the legislators representing you so that it will be easy for you to appeal to them for action when it is necessary to oppose or support bills that may be introduced.

### Bills Introduced

Senate Int. 4—Williamson, Assembly Int. 16—Hill, authorizes beneficiary of member of State Retirement System who arrived at age of 67 after 21 years' continuous service as village health officer and school doctor, who dies subsequent to April 1, 1939, after application for optional benefit and before time for retirement, to receive benefits under the option upon payment to retirement fund of any moneys paid as death benefit. Referred to the Pensions Committee in the Senate and to the Civil Service Committee in the Assembly.

Senate Int. 10—Williamson, includes female nurses of Army and Navy corps with veterans allowed preference in civil service positions as to removal or transfer. Referred to the Civil Service Committee.

Senate Int. 13—Bewley, Assembly Int. 46—Whitney, imposes a 3 per cent tax on gross receipts on retail sales, services, and facilities after June 30, 1941, where aggregate sales are in excess of \$1,000, revenues so derived to be deposited in separate account to the credit of the State Comptroller in banks he may designate, plan for distribution of moneys to localities on a basis of population is provided, but in no case shall sum to any locality exceed \$15.00 per capita in any calendar year and no moneys accruing shall be distributed to any locality unless the real estate taxes therein shall have first been reduced at least 10 per cent during the last fiscal year. There is created a municipal bond control board in the Audit and Control Department to supervise the issuance of bonds by municipalities. An additional registration fee on motor vehicles, motor cycles, and trailers of 2 per cent is imposed upon first registration or change of ownership, imposes a 1c tax for each 10c or fraction on admission tickets where admission cost is more than 50c, and imposes other amusement taxes. Exemptions include

certain food stuffs and dairy feeds, newspapers, motor fuel, tuition fees to institutions of learning, religious services, services of banks, banking institutions, services supplied by hospitals supported in whole or in part by public funds. Suspends laws relating to supervision by State Social Welfare Department and state aid for local home relief and provides for such relief through local agencies. Appropriates \$500,000 to Tax Department and \$25,000 to Audit and Control Department. Referred to the Taxation Committee in the Senate and to the Ways and Means Committee in the Assembly.

Senate Int. 18—Warner, Assembly Int. 77—Hollowell, makes provision prohibiting alcoholic beverage sales to children apply to children under 18 years of age instead of 16. Referred to the Codes Committees.

Senate Int. 59—Mahoney, Assembly Int. 24—Mailler, increases from five to six the number of members of Assembly to be appointed by Speaker to Commission created to study health of inhabitants of the State. Referred to the Finance Committee in the Senate and the Ways and Means Committee in the Assembly.

Senate Int. 97—Graves, Assembly Int. 79—Allen, prohibits generally the manufacture, sale, or serving of adulterated or misbranded foods. Referred to the Agriculture Committees.

Senate Int. 108—Young, Assembly Int. 195—Vincent, makes provision relating to offenses not bailable by inferior courts apply to the possession or distribution of narcotic drugs, instead of habit-forming drugs, and requires the finger-printing of persons convicted of felony, misdemeanor, and offenses of Art. 22, Public Health Law, which relates to narcotic drugs. Referred to the Codes Committees.

Senate Int. 115—Wicks, creates board in State Education Department for licensing and regulating practice of optical dispensing, and appropriates \$10,000, also relates to licensing optometrists, sale of eyeglasses in stores, and to advertising prices. Referred to the Finance Committee.

COMMENT Senator Wicks had this bill last year. It passed both Houses and was vetoed by the Governor.

Assembly Int. 10—Crews, provides that no person working under compressed air shall be subjected to pressure exceeding 48 pounds, instead of 50 as at present, employer may determine time of each shift when pressure is under 20 pounds provided total for two shifts does not exceed six hours, instead of eight as at present, also changes schedule of shifts and intervals of work for each 24-hour period. Referred to the Labor Committee.

Assembly Int. 94—L. Bennett, provides in actions against New York City or education boards of such city for damages for personal injuries resulting from negligence, the records of both hospital and police departments shall be available to injured person and his attorney. Referred to the New York City Committee.

Assembly Int. 108—McCaffrey strikes out



provision giving injured employee or carrier right to select and pay for physical examination, and requires injured employee to submit to

physical examination as commissioner or board may require Referred to the Labor Committee

## Bulletin No 2

**T**HE Committee is considering Wednesday, February 7, as the date for the next annual conference of County Society Legislative Chairmen. It is suggested that the chairmen set aside this date, and the Committee wishes also to suggest that the chairmen of the Legislative Committees of the Auxiliaries will be welcome to attend this conference if they care to do so. The conference will be held in Albany and a later announcement will name the hour and hotel.

### Bills Introduced

Senate Int 134—Warner, Assembly Int 152—Milmoë, regulates sale, distribution, and possession of fireworks by local authorities, permits being restricted to public display, local ordinances are superseded and certain exceptions are made. Referred to the Codes Committees.

**COMMENT** Senator Warner had this bill last year but it was killed in committee. This year several bills similar in nature have been introduced. The Medical Society of Onondaga County a few years ago recommended to the Syracuse authorities that a restriction be placed on the sale of fireworks, and later the Medical Society of the County of Albany recommended to the City of Albany that a similar ordinance be enacted prohibiting the sale of fireworks in the city. This has operated effectively for several years, but merchants selling fireworks have circumvented the law by erecting temporary booths and stands just outside the city limits a few weeks before the Fourth of July each year. We are approving this bill.

Senate Int 167—Phelps Assembly Int 161—Walsh strikes out the provision which permits carrier under Workmen's Compensation Law to select physician for examination of injured employee. Referred to the Labor Committees.

**COMMENT** The Law at present requires an injured employee to submit to such physical examination as the commissioner or the board may require" and gives permission to the employee or carrier to select physicians to participate in the examination. The amendment would deprive the carrier of this opportunity. The Committee feels that both parties should have the opportunity of selecting physicians to participate in the examination but if either the carrier or the employee does not name a physician to participate, then the other should not be permitted to do so either, in other words, if there is to be participation in the examination both parties should be represented or neither.

Senate Int 199—Desmond, creates a commission to study problem of trichinosis in cooperation with State Health and Agriculture Departments, and appropriates \$25,000. Referred to the Finance Committee.

Senate Int 240—Young, permits sale of narcotic drugs to a physician or surgeon licensed in other state, territory, or District of Columbia or to a retired commissioned medical officer of U S Army, Navy, or Public Health Service employed upon a ship or aircraft. Referred to the Health Committee.

**COMMENT** This amendment revises the State law so that it may read in accordance with the Federal law.

Senate Int 258—Hastings, Assembly Int. 323—C D Williams, authorizes school district trustees, as well as education boards and union free school districts, to furnish instruction for physically-handicapped children, including remedial instruction, and provides for apportionment of State moneys for aid of common schools to teachers giving such instruction. Referred to the Educational Committees.

**COMMENT** This amendment is based on findings reported by the Commission which is making a study of the condition of the deaf and hard-of-hearing children in the State.

Senate Int 304—Martin, establishes in State Labor Department a division for the employment, training, and welfare of the deaf and for combating all unfair discrimination, and appropriates \$10,000. Referred to the Labor Committee.

Senate Int 310—Hastings, Assembly Int. 322—C D Williams, requires every physician nurse parent or guardian to report to State Health Commissioner the age and residence of minor under six years who is totally deaf or whose hearing is impaired, in New York City, for adequate care and treatment by appropriate welfare or other agency. Referred to the Health Committees.

**COMMENT** It is already required in the State outside of New York City that the deaf and hard of hearing shall be reported to the Health Department. This amendment would require the same in New York City.

Senate Int 313—Mahoney, Assembly Int 295—Butler, creates a commission of State Mental Hygiene Commissioner, three physicians to be appointed by the Governor, three Assemblymen and three Senators, to study existing facilities for the care and treatment of feeble minded individuals, and appropriates \$25,000. Referred to the Finance Committee in the Senate and the Ways and Means Committee in the Assembly.

Senate Int 314—Condon, provides that reports of physicians in workmen's compensation cases filed with employer and industrial commissioner, must be verified. Referred to the Labor Committee.

**COMMENT** This bill relates to the claims of persons injured outside of the State of New York but entitled to compensation or benefits in this State.

Senate Int 355—Gutman, Assembly Int 241—Wagner, creates in the State Labor Department a division in industrial hygiene for investigating and reporting to Industrial Commissioner concerning hygienic conditions in factories, mercantile establishments, mines, tunnels, and other places subject to Labor and Workmen's Compensation Laws for purpose of preventing industrial accidents and controlling health hazards and occupational diseases. Referred to the Labor Committees.

Assembly Int 141—Dollinger, makes it unlawful to sell, possess use, or explode fireworks except on permit of mayor, town supervisor, or other duly constituted licensing agency, for public display by municipality, fair association or other organization with certain exceptions, a bond of not less than \$5,000 to be filed. Referred to the Codes Committee.

Assembly Int 150—Goldstein, provides that injured person or legal representative, in case of death resulting from injuries, shall be permitted to examine hospital records relative to treatment and care. Referred to the Judiciary Committee.

Assembly Int. 183—Holley, creates in the State Health Department a consumers' bureau for registration, advertising, control, analysis, scientific research, education, publicity, manufacture and sale of drugs, cosmetics, or health devices in order to prevent adulteration or misrepresentation. Referred to the Health Committee.

COMMENT This bill has been before the Assembly on two previous occasions.

Assembly Int 188—Holley, provides that persons charged with crime or detained as witnesses in institutions shall be examined for injuries at time arrested, and records shall be kept from time of entrance or transfer to time discharged. Referred to the Penal Institutions Committee.

COMMENT This bill has been before the Legislature on one or two occasions.

Assembly Int. 192—McLaughlin, makes it unlawful to sell, use, or explode fireworks except on permit of fire department or mayor, for public

display by municipality, fair association, or other organization, with certain exceptions. Referred to the Codes Committee.

Assembly Int. 330—Bocca, provides that records of hospital certified by officer in charge may be read in evidence in any court and shall be prima-facie evidence of facts stated therein, if declarations of nonmedical nature or which are explanatory or descriptive are not admissible. Referred to the Codes Committee.

COMMENT It is almost impossible to have a doctor accompany records from a hospital to the court and this amendment would obviate the necessity of a doctor appearing in court by permitting him to file a verified statement.

Assembly Int. 108—McCaffrey, reported in the last bulletin. The Committee has suggested to Mr. McCaffrey that he draft his bill so that either the carrier or the employee is to be represented by his physician at the time the commissioner of labor's examination is made, then both shall be represented or neither.

#### Action on Bills

A Int 24—Mauler Long Range

Health Com, additional member

A Int 150—Goldstein Hospital

records, inspect

To Governor

Reported

JOHN L BAUER LEO F SIMPSON

WALTER W MOTT

Committee on Legislation

JOSEPH S LAWRENCE

Executive Officer

unsat

S C Shaw of Tompkins

E T Barrett of Suffolk

M Golberg of New York

R Schwartz of Kings

W Kurnan of Kings

P J Casey of Rensselaer

#### Senate Committee on Codes

Walter J Mahoney Ch

William H Hampton

Phiny W Williamson

Roy M Page

F R Coudert Jr

Farle S Warner

Fred A Young

William C Martin

Karl K Bechtold

Elmer F Quinn

A Spencer Field

John J McNaboe

Lazarus Joseph

#### Senate Committee on Public Education

Roy M Page, Ch

Rhoda Fox Graves

Thomas C Desmond

Rodney B James

Isaac B Mitchell

Chauncey B Hammond

John J Dunngan

Henry W Griffith

A Spencer Field

Joseph D Nunn

Rae L Egbert

Jacob J Schwartz

Ex Of

Joseph R Hanley

#### Senate Committee on Public Health

Fred A Young Ch

Thomas C Desmond

Benjamin F Feinberg

William H Hampton

James W Riley

William F Condon

Henry W Griffith

Jacob J Schwartz

John T McCall

Charles D Perry

#### Senate Committee on Labor & Industry

William F Condon Ch

Arthur H Wicks

Walter W Stokes

Rhoda Fox Graves

Isaac B Mitchell

William Bwley

Allan A Ryan Jr

John J Howard

Edward J Coughlin

Lazarus Joseph

#### Senate Committee on Judiciary

Benjamin F Feinberg Ch

Earle S Warner

William H Hampton

Phiny W Williamson

Roy M Page

Walter J Mahoney

Karl K Bechtold

Fred A Young

Frederic R. Coudert Jr

Philip M Kleinfield

Elmer F Quinn

John L Buckley

A Spencer Field

John J Dunngan

Joseph R Hanley

John J McNaboe

#### Assembly Committee on Public Health

E F Vincent of Broome Ch

E J Louis of Oswego

W O Daniels of St Lawrence

F A Guggino of Erie

W M Stuart of Steuben

C D Williams of Oneida

J H Chase of Cayuga

B H Demo of Lewis

L G Ryan of Clinton

A Guda of New York

R P Wagner Jr of New York

J H Ferri of Queens

J P Teagle of Queens

R Giordano of Kings

Harry J Tift of Chemung

#### Assembly Committee on Codes

H D Sutor of Niagara Ch

G B Parsons of Onondaga

W O Daniels of St Lawrence

H B Ehrlich of Erie

R Wright of Jefferson

J D Bennett of Nassau

M Goldberg of New York

Harold Armstrong of Schenectady

M Wilson of Westchester

C W Hawkins of Kings

L Farbstien of New York

S J Jarema of New York

W T Andrews of New York

D E Fitzpatrick of Queens

W B Mann of Monroe

#### Assembly Committee on Public Education

H L Averill of Wayne Ch

W Milroe of Madison

E D Fite of Dutchess

W O Daniels of St Lawrence

Janet H Todd of Westchester

C T Backus of Otsego

Edith Cheney of Steuben

W E Brady of Greene

F J Sellmayer of Monroe

C N Hammond of Orange

P H Sullivan of New York

I Dollinger of Bronx

C J Beckinella of Kings

O McGovern of New York

J W Feely of Kings

J W Feely of Greene

#### Assembly Committee on Judiciary

H A. Reoux of Warren Ch.

R F Piper of Erie

J E Conway of Ulster

C E Darline of Chautauqua

L V Breed of Onondaga

M Mitchell of New York

C T Backus of Otsego

S F Wicks of Essex

R J Sherman of Saratoga

A Schulman of Monroe

W C McCreery of Kings

D Flynn of New York

I H Holley of New York

F J McCaffrey of New York

P A Quinn of Bronx

#### Assembly Committee on Labor & Industries

P A Washburn of Columbia

Ch.

H A Rapp of Genesee

H C Ostertag of Wyoming

W R Williams of Oneida

F S Hollowell of Yates

M Wilson of Westchester

S F Wicks of Essex

A J Canney of Erie

F J McCaffrey of New York

# Medical News

## County News

### Bronx County

The program at the meeting of the Bronx County Medical Society on December 20 included these addresses "The Medical Economic Scene," Nathan Sinai, Ph D, Professor Public Health Administration, University of Michigan, and "Medical Expense Indemnity," Frederic E Elliott, M D, Secretary-Treasurer, Medical Expense Fund, Inc

A series of fortnightly health education meetings are being held in the Mott Haven Health Center every other Thursday at 8 30 P M from January 4 to May 9

The meetings have been arranged in cooperation with the Bureau of Health Education of the Department of Health, the Medical Advisory Committee, the Bronx Tuberculosis and Health Committee, and with the approval and assistance of the Bronx County Medical Society. It is the first time the County Medical Society has actively cooperated in such a program to stress the importance of the private physician and the Department of Health in their allied fight to save life. Well-known speakers have been drawn from the Bronx County Medical Society, the Department of Health, and other medical sources

The subjects and dates are as follows Syphilis, January 4, Appendicitis, January 18, Pneumonia, February 1, Diphtheria, February 15, The Dangers of Whooping Cough and Measles, February 29, Tuberculosis, March 14, Trichinosis, March 28, Diabetes, April 11, Acute Rheumatic Fever and Heart Disease in Children, April 25, Cancer, May 9

### Broome County

The annual meeting of the Broome County Medical Society was held at the Monday Afternoon Club House, in Binghamton, on December 12 The speaker was Dr David D Rutstein, medical consultant to the Bureau of Pneumonia Control, Department of Health, New York State, instructor of medicine at Albany Medical College and director of the Pneumonia Service at Albany Hospital His subject was "Treatment of Pneumonia," with special attention to the use of sulfapyridine

### Cattaraugus County

The new officers of the Cattaraugus County Medical Society are as follows president, Theodore J Holmlund, Cattaraugus, vice-president, Arthur L Runals, Olean, secretary, Leo E Reimann, Franklinville, censors, Henry C. Allen, Gowanda, Hal W Hammond, Franklinville, Leland R Stoll, Randolph, Norman P Johnson, Olean, and J Stewart Fleming, Salamanca

### Chautauqua County

The annual meeting of the Medical Society, County of Chautauqua, was held at the Hotel Jamestown on December 13, and the following officers were elected president, Harry E Wheelock, Fredonia, vice-president, Ernest J Kelley, Jr, Jamestown, secretary, Edgar Bieber,

Dunkirk, treasurer, Frederick J Pfisterer, Dunkirk

F J Pfisterer, Dunkirk, C H Richards, Dunkirk, and Walter L Rathbun, Cassadaga, were elected censors Dr D W Buckmaster and Dr Bieber are to be delegates to the State Society meeting

Dr Buckmaster of Jamestown presided at the luncheon which followed and Dr Robert Dinsmore of Cleveland spoke on "The Management of Common Gallbladder Problems"

Dr Paul Garfield Weston, of Jamestown, founder and director of the Jamestown Public Health Laboratory, and prominent in medical activities, died on December 18 at his home, after an illness of nearly a year

He was the author of many papers in medical journals on physiology, pathology, and chemistry Much of the data in these papers has been included in standard medical textbooks

### Chemung County

The Medical Society of the County of Chemung has chosen these officers for 1940 president, George R Murphy, Elmira, vice president John H Burke, Sr, Elmira, secretary, Robert J Lawler, Elmira, treasurer, Sven L Larson, Elmira, delegate to State Society, Eliot T Bush, alternate to State Society, John F Lynch, delegate to sixth district, Donald J Tilton, alternate to sixth district, Floyd E Woodhouse Board of censors Floyd E Woodhouse, Alfred John Westlake, and Charles H Erway Board of trustees Arthur W Booth, Charles I Abbott, and J Lee Kinner

### Chenango County

The Chenango County Medical Society has chosen these officers for 1940 president, Mat G Boname, Oxford, vice-president, William D Mayhew, Oxford, and secretary-treasurer, John H Stewart, Norwich

The Chenango County Board of Supervisors on December 15, voted to allow doctors twenty five cents a mile, one way, in addition to the regular fee of \$2 per call, on old age relief cases but a few minutes later voted to reconsider and table the motion on finding no funds available.

### Cortland County

The following officers for 1940 were elected by the Cortland County Medical Society on December 15 president, Robert Fairchild, vice president, Robert H Brink, secretary, William A Wall, treasurer, Bert R Parsons Censors Stewart A VerNooy, chairman, James Walsh, Charles O Mills, Hugh Frail and C E Chapin

### Delaware County

The Delaware County Medical Society held a dinner and annual election at the Elm Tree restaurant in Delhi on December 18

Officers elected are president, Thomas C Monaco, of Walton, succeeding W H F New man, of Stamford, vice-president, Jerome Ko-

gan, of Stamford, succeeding J H Marsh, and secretary, Orin Q Flint, of Delhi, re-elected

### Erie County

The present duty of the medical profession "is to point out the evils of socialized medicine," Dr Carlton E Wertz said on December 18, in his final address as president to members of the Medical Society of Erie County in Hotel Statler. Dr Herbert E Wells, of Lackawanna, was elected to succeed him.

"The fact that our health records are better than ever in spite of the depression and that only Australia and New Zealand, which do not have socialized medicine, excel us does not seem to mean anything to our agitators for socialized medicine," Dr Wertz declared.

Terming the general practitioner "the mainstay of our American democratic system of medicine," Dr Wertz said too much stress has been placed on specialized medicine. "No one questions the need for specialists," he added, but if we are not careful, the general practitioner will be replaced by a medical social worker who will tell the patient what specialist to see."

The following officers were elected for 1940 president, Herbert E Wells, Lackawanna, first vice-president, Nelson W Strohm, Buffalo, second vice-president, Harvey P Hoffman, Buffalo, secretary, Louise W Beams-Hood, Buffalo, treasurer, Roy L Scott, Buffalo, board of censors Charles W Bethune, Buffalo, Joseph D Godfrey, Buffalo, Elmer T McGroder, Buffalo, E Dean Babbage, Buffalo, Francis E Fronczak, Buffalo, chairman on legislation, Joseph C O'Gorman, Buffalo, chairman on public health, John D Naples, Buffalo, chairman on economics, Harold F Brown, Buffalo, chairman on membership, Charles R Borziller, Jr, Buffalo, delegates, Carlton E Wertz, Buffalo, Albert A Gartner, Buffalo, John T Donovan, Buffalo, Herbert E Wells, Lackawanna, alternates, Robert E DeCeul, Buffalo, Joseph C O'Gorman, Buffalo, Edward J Lyons, Buffalo, Samuel Varco, Buffalo.

The Medical Union of Buffalo, oldest private medical club in western New York, elected Dr L Maxwell Lockie president in Hotel Buffalo on December 28. He succeeds Dr William J Orr. Other officers are vice-president, Dr Curtis C Johnson, and secretary-treasurer, Dr Nelson W Strohm, elected for his fifth consecutive term. A paper on "The Future of the Gynecologist" was presented by Dr James E King, professor of gynecology, University of Buffalo Medical School.

The Section of Medicine of the Buffalo Academy of Medicine met on December 13, at the Buffalo Museum of Science, Humboldt Park, and heard a paper on "The Diagnosis and Treatment of Meningitis," by Dr Josephine B Neal, clinical professor of neurology, College of Physicians and Surgeons, New York City.

### Genesee County

The annual meeting of the Genesee County Medical Society was held at Batavia, on December 13. The program

1 Discussion of laboratory plan, to be presented to the Board of Supervisors

2 Discussion of plan of Medical Expense Indemnity

3 Election of officers president, E G Ribby, Byron, vice-president, Charles M Graney, Batavia, secretary and treasurer, Peter J DiNatale, Batavia. Delegate for two years Peter J DiNatale, Batavia, alternate delegate, Paul P Welsh, LeRoy.

Paper of the day was by Dr Joseph B Loder, Rochester, on "Complications of Pregnancy"—*Reported by P J DiNatale, M D, Secretary*

### Greene County

At the annual meeting on October 10, the following officers were elected to the Greene County Medical Society president, Kenneth F Bott, Greenville, vice-president, Herbert Weinauer, Windham, secretary, William M Rapp, Catskill, treasurer, Mahlon H Atkinson, Catskill, chairman legislative committee, Percy G Waller, New Baltimore, chairman public relations committee, William V Wax, Catskill, delegate, William A Petry, Catskill.

### Herkimer County

The Medical Society of the County of Herkimer elected these officers for 1940 on December 12 president, George J Frank, 1st vice-president, Harry D Vickers, 2nd vice-president Byron G Shults, 3rd vice-president, Nicholas D Lill, secretary, Fred C Sabin, treasurer, Albert L Fagan, librarian, George S Eveleth. Censors George A Burgin, Harold F Buckbee, James F Gallo, Harry J Sheffield, F B Conterman. Delegate, George A Burgin, alternate, George J Frank.

### Jefferson County

The Medical Society of Jefferson County met on December 14, at the Black River Valley Club, with dinner at 6 30 P.M. The program "Reconstructive Surgery," by Forrest Young, M D, Strong Memorial Hospital, Rochester, and at 5 P.M. there was a tumor conference at the Good Samaritan.—*Reported by C A Prudhon, M D, Secretary*

### Kings County

Officers of the Medical Society of the County of Kings to serve during 1940 under the leadership of Dr Daniel A McAteer, who was named president-elect a year ago, were elected at the annual meeting on December 19.

Named as president-elect, to take office in January, 1941, was Dr Maurice J Dattelbaum of 263 New York Avenue, who is attending physician at Beth-El Hospital. Dr Philip I Nash, retiring president, presided at the meeting.

Papers were presented during the scientific session by Dr Marion B Sulzberger, dermatologist and syphilologist, of Manhattan, and Dr Samuel M Feinberg, associate professor of medicine and chief of the allergy department at Northwestern University Medical School.

Among the officers elected for 1940 were Robert M Rogers, vice-president, Thomas B Wood, secretary, Benjamin M Bernstein, associate secretary, Irwin E Sins, associate treasurer, Jacques C Rushmore, directing librarian, and Edwin P Maynard, Jr, associate directing librarian and curator.

John L Bauer, Thos M Brennan, and Philip Nash were chosen trustees for five years. Dr Albert F R. Andresen was named trustee for two years to fill an unexpired term.

Dr Hyman I Teperson, Brooklyn radiologist, was inducted as president of the East New York Medical Society at its thirtieth annual installation exercises on January 8 at the Temple Auditorium, Rochester Avenue and St John's Place. Dr Harry Apfel, one of the founders of the society and its first president, officiated.

One of the oldest medical organizations in Brooklyn, the East New York Medical Society has a membership of over four hundred doctors from the East New York, Brownsville, and Bedford sections.

Other officers installed William Levine, Morris Ant, vice-presidents, Max Dannenberg, treasurer, Mortimer M Kopp, secretary, Harry Beller, recording secretary.

The Williamsburgh Medical Society of Brooklyn held its 25th meeting on January 8 at the Leon Louria Memorial Auditorium of the Jewish Hospital, St Mark's and Classon avenues. Commander Frank W Ryan of the U S N Medical Corp and Dr Edgar D Congdon, professor of anatomy at L I College of Medicine, were the guest speakers.

#### Lewis County

The board of supervisors of Lewis County have authorized the formation of a county laboratory as a branch of the state laboratory. Dr E Dalton, of Beaver Falls, and Dr T A Lynch, of Lowville, have been appointed the two physicians on the board of managers.

#### Monroe County

New advances in the attack of science on anemia through the use of radio-iron are reported by Dr George H Whipple, dean of the University of Rochester School of Medicine, and Nobel prizewinner for research in anemia, and Dr Paul F Kahn, also of the university.

The two scientists revealed before the American Association for the Advancement of Science at Columbus that with radio-iron they are able to trace accurately the rate of formation of hemoglobin, the red matter of the blood which carries oxygen from the lungs to all parts of the body. Anemia results when this hemoglobin formation does not occur normally.

The university's cyclotron, or 'atom smashing' machine, again has played a part in medical science's battle against disease, the doctors reported, according to the Associated Press. By the atomic bombardment of iron with the cyclotron radioactivity or emission of radium-like particles was developed.

By the use of sensitive instruments which count those particles the formation of hemoglobin and its rate of survival can be determined. The full use of the method in the treatment of disease has not yet been determined, said Doctors Hahn and Whipple. Doctor Hahn is an instructor in chemistry and experimental pathology.

#### Montgomery County

Dr William R Pierce, of Amsterdam, who died on November 9 of coronary sclerosis aged 78, had practiced medicine for 55 years and was secretary of the County Medical Society for 35 years.

#### New York County

Drastic cuts in the budget of the New York Academy of Medicine, 2 E 103rd St., have been

forced by "financial difficulties," it was reported by Dr Malcolm Goodridge, president, at the organization's annual meeting on January 4.

Activities have had to be curtailed in every department, Dr Goodridge said, and five of the staff of eighty employees have been released.

Dr Herbert B Wilcox, director of the Academy, revealed that reserve funds have been dipped into during the last two years because of recurring deficits.

To protect children, and adults as well, from tuberculosis, syphilis, and other diseases which might be acquired through maids and other household workers, The Bureau of Part Time Work, 1440 Broadway, a noncommercial organization and a member of the Welfare Council, is starting a movement to have domestic servants receive an x-ray examination of the lungs, a Wassermann blood test, and a complete physical examination semiannually, it is announced by Miss Eleanor Adler, founder of the Bureau.

Dr George Emerson Brewer, cancer specialist, regarded as one of America's outstanding surgeons, who retired in 1927, died on December 24 in the Harkness Pavilion of the Columbia Presbyterian Medical Center. He was 78.

He always was deeply interested in research and with Dr Joseph A Blake he developed the research laboratory of surgical pathology at the College of Physicians and Surgeons in 1904 and 1905. He was the author of many articles on anatomical and surgical conditions and wrote a *Text Book on Surgery*, published in three editions by Lea & Febiger, and *Surgical Diagnosis* published by Appleton & Co.

In the World War he was director of Base Hospital No 2, which relieved General Hospital No 1 of the British Expeditionary Forces. Later he was consulting surgeon of the 42d Division, A E F, and chief consultant in surgery of the First Corps, and the First Army. He was cited by Gen John J Pershing for especially meritorious and conspicuous service in the battles of Château Thierry, St. Mihiel, and the Argonne.

Dr Robert L Lewis, professor emeritus of clinical otolaryngology at the College of Physicians and Surgeons, Columbia University, since April, died on December 20, of pneumonia at his residence, 40 E 64th Street. He was 77 yrs old.

Dr Lewis had been a professor in the department of ear, nose, and throat diseases at Columbia for thirty-one years.

#### Niagara County

The annual dinner meeting of the Medical Society of the County of Niagara was held in the Niagara Hotel ballroom at Niagara Falls on December 12. The guest speaker, Ernest Robert Rosse, discussed "The Safety Valve of Sanity." Officers were elected for 1940.

#### Oneida County

Early diagnosis is the greatest enemy of intestinal cancer, Dr Carl Eggers, professor of clinical surgery, Columbia University, told the Utica Academy of Medicine at its meeting on December 21.

He spoke of the importance of x-ray examinations and deplored the fact that the cost prevents many patients in the limited income class from

finding out whether or not vague symptoms mean cancer

Dr Robert Lindsay, Old Forge, gave the preliminary paper, "Medical Practice in the Adirondacks."

#### Onondaga County

Members of the Syracuse Academy of Medicine elected Dr P. K. Menzies to its presidency at their annual meeting on December 19, in the University Club, at which Dr Brooks W. McCuen, retiring president, presided.

Other officers named were Donald S. Childs, vice-president, Floyd R. Parker, secretary, Clifford E. McElwain, treasurer, George S. Reed, Floyd Burrows, and R. S. Farr, trustees for one year, and McCuen, Leo E. Gibson, and Herbert C. Yeckel, council members for one year.

Announcement was made that Dr Wardner D. Ayer had won the academy's annual prize essay contest award of \$50 for his paper on "Twenty Years in Neuro-Surgical Pathology in Syracuse," given at the academy's May meeting.

Dr Brewster C. Doust is the new president of the Onondaga County Medical Society. The JOURNAL regrets its error in printing that Dr H. Burton Doust, the Commissioner of Health of Syracuse, had been named to that office.

#### Otsego County

The annual meeting of the Otsego County Medical Society was held on December 13, at the Homer Folks Hospital in Oneonta and the following officers were elected for 1940: president, Ralph Horton, vice-president, Charles C. McCoy, treasurer, Frederick E. Bolt, secretary, Floyd J. Atwell, censor, Earl C. Winsor, delegate to State Society, Floyd J. Atwell, alternate John H. Powers.

#### Queens County

Dr James R. Reuling, of Bayside, has been re-elected to head the Queensboro Tuberculosis and Health Association during 1940. George Lawrence, M.D., of Flushing, and Harold H. Mitchell, M.D., of Astoria, are among the newly elected directors.

Dr Joseph Baum, of Far Rockaway, was given a testimonial dinner at Lawrence Village Park Clubhouse on December 18 in celebration of his 70th birthday. Dr Baum recently retired as chairman of the medical staff of St. Joseph Hospital. He was succeeded by Dr Alfred Calvelli, who acted as toastmaster at the dinner.

Drs William K. Rogers, of Flushing, and Vincent Juster, of Jamaica, are the treasurer and assistant treasurer respectively, of the Queens County Medical Society for 1940. Unfortunately incorrect names for these offices were published in the January 1 issue which the JOURNAL regrets very much.

#### Rockland County

The Medical Society of the County of Rockland held its annual meeting and dinner on December 6 at the Hotel St. George, Nyack.

The principal officers elected for 1940 are president, Russell E. Blaisdell, Orangeburg, vice-president, Matthew J. Sullivan, Haverstraw, treasurer, Dean Miltimore, Nyack, and secretary, William J. Ryan, Pomona.

Dr George M. Richards was elected chairman of the board of censors for 1940 and 1941, with Dr Pomerantz as vice-chairman. Other members include Dr E. Armand Scala, Dr J. C. Dingman, Dr Sengstacken, and Dr Edwyn O'Dowd. Dr Stephen R. Monteith was named delegate to the State Medical Society for 1940 and 1941, with Dr Ryan as alternate.—*Reported by William J. Ryan, M.D., Secretary*

#### Schenectady County

At the meeting of the Schenectady County Medical Society on January 2, in the Auditorium of the Nurses Home of the Ellis Hospital a paper was presented on "Benign and Malignant Tumors of the Larynx: Observations of General Interest on the Diagnosis and Treatment," by Gabriel Tucker, M.D., Professor of Bronchology, Esophagology, and Laryngeal Surgery, Graduate School of Medicine, University of Pennsylvania.

#### Schoharie County

At the annual meeting of the Schoharie County Medical Society, held in the W. H. Golding Central School on October 10, the following were elected officers for 1940: president, David W. Beard, Cobleskill, vice-president, R. G. S. Dougall, Cobleskill, secretary, Herbert L. Odell, Sharon Springs, treasurer, Duncan L. Best, Middleburg, censor, Joseph F. Duell, Jefferson, delegate to State Society, David W. Beard, Cobleskill.—*Reported by Herbert L. Odell, Secretary*

#### Schuyler County

The new officers of the Schuyler County Medical Society are as follows: president, Paul F. Willwerth, Montour Falls, vice-president, Joseph Y. Roberts, Watkins Glen, secretary and treasurer, Oakley A. Allen, Watkins Glen. Delegate, Jos. Y. Roberts, Watkins Glen, alternate, Paul F. Willwerth, Montour Falls.—*Reported by O. A. Allen, M.D., Secretary*

#### Seneca County

The officers of the Seneca County Medical Society for 1940 are: president, Robert F. Gibbs, Seneca Falls, vice-president, Arthur F. Baldwin, Waterloo, secretary and treasurer, Duane B. Walker, Waterloo.

Ill for some time, Dr Ephraim W. Bogardus, 84, well-known practicing physician of Seneca County for more than fifty years, died on December 16 in his home, 218 Lewis street, Geneva.

He was president of the County Medical Society in 1889.

Critically ill for several weeks, Dr John F. Crosby, 81, dean of the Seneca County medical profession, died on January 2 at his home on the Lake Road, three miles east of Seneca Falls.

He was president of his County Medical Society several times and was formerly a member of the State legislature.

He was president of the Village of Seneca Falls in 1892 and 1893 and served as mayor in 1933 and 1934. At one time he was chief of the Seneca Falls Fire Department and for many years was a member of the Old Salsby Hose Company.

#### Tioga County

Dr Charles J. V. Redding, of Owego, was elected president of the Tioga County Medical

Society for the ensuing year at the annual dinner meeting on December 5, at the Green Lantern Inn in Owego. Other officers named are vice-president, J B Schamel, Waverly, secretary, Ivan N Peterson, Owego, censors, F A Carpenter, Waverly, and William B Gregory, Owego.

The principal speaker at the meeting was Dr Charles Post, professor of medicine at the Syracuse University School of Medicine. He gave an illustrated lecture on "Treatment of Pneumonia."

#### Tompkins County

At the annual meeting of the Tompkins County Medical Society held December 19, the following officers were elected: president, Hudson J Wilson, Ithaca, vice-president, Dean F Smiley, Ithaca, secretary-treasurer, Willets Wilson, Ithaca, delegate, Norman S Moore, Ithaca, alternate, Dean F Smiley, Ithaca, censors, Henry E Mernam, Ithaca, Henry B Sutton, Ithaca, Leo P Larkin, Ithaca, Henry W Ferris, Ithaca, William L Seil, Newfield.

#### Ulster County

Employment of five public health nurses at a gross cost of \$3,000 each, was asked of the Ulster County board of supervisors at its meeting on December 20.

The request was made by Dr Virgil B DeWitt of New Paltz and Dr Jay R Lockwood of Highland, representing the Ulster County Medical Society which has given unanimous approval to the plan. At the same time a communication was read from Mary H Oxholm of Esopus, president of the Public Health Nursing Committee of the Town of Esopus, saying that unless nurses are employed the "committees in the various towns must cease to function and we feel it would be many years before interest in public health could be roused again."

Officers for 1940 are as follows: president, William S Bush, vice-president, John B Krom, secretary, Clarence L Gannon, treasurer, Chester B Van Gaasbeek, delegate to the State Medical Society, Frederic W Holcomb. All are from Kingston.

#### Wayne County

The new officers of the Wayne County Medical Society for 1940 are as follows: president, Charles Steyaart, Lyons, 1st vice-president, James L Davis, Newark, 2nd vice-president, George W Pasco, Wolcott, secretary and treasurer, James L Davis, Newark, delegate Ralph Sheldon, Lyons, alternate, Sam W Houston, Wolcott, board of censors: Arthur Besmer, Marion, George S Allen, Clyde, Myron E Carmer, Lyons.

#### Westchester County

Dr Henry J Vier, outgoing chief-of-staff of St Agnes Hospital and recently elected president of the Westchester County Medical Society, was honored with a testimonial dinner on December 27, at the Westchester Country Club. Fifty-five members of the St Agnes staff were present.

Dr Vier was presented with a gold fountain pen for his work as president of the staff, a position he has held for two years. He is succeeded by Dr Harris W Campbell, recently elected staff president.

#### Wyoming County

The new officers of the Wyoming County Medical Society for 1940 are as follows: president, G Stanley Baker, vice-president, Clifford H. Harville, secretary-treasurer, Oliver T Ghent, delegate to state medical society, Henry S Martin, alternate delegate, Richard B Bean.

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### Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
E W Bogardus	86	Buffalo	In December	Geneva
John F Crosby	81	Vermont	January 2	Seneca Falls
Ludwig A. Filips	49	Budapest	December 23	Manhattan
Maurice Freiman	55	Univ & Bell	December 22	Manhattan
Max Grossman	58	L I C Hosp	January 5	Brooklyn
Charles J McCambridge	64	Queen's Canada	January 8	Poughkeepsie
M Thomas Rauh	68	L I C Hosp	January 1	Richmond Hill
Victor A Robertson	78	P & S N Y	December 22	Brooklyn
Louis J Staack	65	P & S N Y	December 25	Brooklyn
Charles T Walton	80	Albany	October 31	Port Henry
Webb W Weeks	54	P & S N Y	January 10	Manhattan

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#### THAT TELLS THE STORY

A recent announcement by Dr Richard A Bolt, director of the Cleveland Child Health Association, is of more than passing significance.

Dr Bolt reported that among the 2,500 women

who completed the prenatal education classes held by the association in cooperation with the Cleveland Academy of Medicine during the first six months of 1939, there was not a single fatality from childbirth.

# The Woman's Auxiliary

To the Medical Society of the State of New York

## Dear Auxiliary Members

A new year with its new responsibilities, its new problems, and its new opportunities, is upon us. There are new health problems to solve, there is new work to be done for the suffering victims of unjust warfare across the ocean, but nearer and far more vital to each and every one of us is the threat of socialized medicine that hangs like the sword of Damocles over the heads of our husbands. These men with their ideals, their code of ethics, their devotion to their beloved profession have not the time to fight this threat. We, the loyal wives, must do our utmost to see that the slender hair on which their future and ours hangs shall not be broken.

Let us all make a new year's resolution that we shall thoroughly acquaint ourselves with the provisions of the Wagner Act and become familiar with the subject of socialized medicine so that by our knowledge and our enthusiasm we may become a mighty force. Surely eighteen hundred New York State Auxiliary members, spread throughout twenty-two counties, can exert a great influence in forming public opinion! We must do our best!

MARY T TOWNE, President

## Cayuga County

The Woman's Auxiliary held the first meeting of the new year January 18, with the new president, Mrs. George Sincerbeaux, presiding. The members were gratified to learn that they had been responsible for much happiness at Christmas by their gifts to the "Home for Convalescing Children."

Public health work done in the county was discussed by Dr. George B. Adams. Chairmen of standing committees were appointed.

## Fulton County

At the first regular meeting of the new Fulton County Auxiliary several new members were added to the roll. Committee chairmen were appointed to choose their own committees.

## Kings County

At the annual meeting of the Woman's Auxiliary the following officers were elected: president, Mrs. Milton Bergmann, first vice-president, Mrs. Henry Dangler, second vice-president, Mrs. Robert Barber, secretary, Mrs. Morris Henry, associate secretary, Mrs. William de Frane, treasurer, Mrs. Charles Fisher, associate treasurer, Mrs. Maurice Dattlebaum.

At the regular meeting in January, Mrs. Clifton Dance, chairman of legislation, gave a talk on "Current Medical Legislation." Mrs. William de Frane discussed a current article from *Hygea*. Mrs. Edwin Griffin discussed plans for a luncheon to be held in March at the Hotel Waldorf to commemorate the fifth anniversary of the Auxiliary.

Mrs. John Bauer exhibited a petit point chair set to be sold at the state convention for the benefit of the Physicians' Home.

Mrs. George Smith, program chairman, introduced the speakers who were guests at this meeting. Dr. George Merrill whose subject was "Allergy", Mrs. Nelson Mules Holden who gave a very interesting book review of *Miss Susie Slagle* by Augusta Tucker.

## Nassau County

Wives of Nassau County physicians could make an excellent showing on some of the current radio quiz programs, judging from their record at the annual Christmas party of the Nassau County Auxiliary held in Mineola. The program was arranged by Mrs. Willard J. Lee. Mrs. Louis Van Kleek was Santa Claus and presented a gift to each who answered a question correctly. Fifteen members of the Plandome Singers Club gave a beautiful music program. Mrs. Leslie Baker sang a group of solos.

## Onondaga County

The Onondaga County Auxiliary planned a novel program for their dinner-dance party held in December. A comical skit was presented and bridge games as well as dancing were enjoyed.

At the January meeting Mrs. Edgar Neptune, the new president, presided. The drive to obtain subscriptions to *Hygea* is to be continued. The guest speaker at this meeting was Dr. Raymond Graham whose subject was "The History of Medicine in Onondaga County."

## Oswego County

The Oswego County Auxiliary held a dinner meeting in December. Announcement was made by the president, Mrs. John Mason, of committee chairmen. It was decided to create a charity fund to bring Christmas cheer to needy families. The guest speakers were Miss Isabelle Murray and Miss Alice Swackhamer, county health nurses, who discussed their work in the county, taking as their subject, "Why Public Health Nurses?"

## Rensselaer County

Women of the Rensselaer County Auxiliary were guests of Albany County Auxiliary in December at a luncheon meeting and bridge party. The principal speaker was Mrs. Luther Kice, president-elect of the State Auxiliary.

At the annual meeting held in December the following officers were elected: Mrs. Stephen Curtis, president, Mrs. John Ennen, first vice-president, Mrs. Walter McShane, second vice-president, Mrs. John Ranney, president-elect, Mrs. Eugene Connolly, recording secretary, Mrs. F. J. Fagan, assistant recording secretary, Mrs. A. J. Hambrook, treasurer, Mrs. John Carroll, assistant treasurer, Mrs. Leo Weinstein, corresponding secretary, Mrs. R. E. DeFries, assistant corresponding secretary.

The auxiliary voted to become a unit member of Troy Council of Social Agencies. Mrs. Peter Harvie explained the work of the council. The annual Christmas party was held at the close of the meeting.



# Medicolegal

LORENZ J. BROSNAN, ESQ

Counsel, Medical Society of the State of New York

## Malpractice—Sufficiency of Evidence

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**I**N A case recently decided by the highest court of one of the western states an interesting situation was presented involving the question of the sufficiency of the proof to hold the defendant guilty of malpractice.

The plaintiff in the action brought suit to recover damages for personal injuries against Doctor G, a physician who had operated upon her and advised concerning her care after the operation. The principal charges were that he had improperly diagnosed plaintiff's condition as a malignancy, and had improperly advised deep x-ray therapy treatments which had proved harmful to the patient.

The case was fully tried, and during the trial defendant introduced the testimony of various doctors in support of the methods followed by him, but the question before the Appellate Court resolved itself into whether the plaintiff's witnesses had adduced sufficient proof to support a finding that defendant was guilty of malpractice. For that reason the testimony of defendant's witnesses was not to any extent under consideration by the Appellate Court.

The plaintiff's witnesses in addition to herself and members of the family, were three physicians, one an x-ray man, and two of them practitioners who took over the care of the patient following Doctor G. The facts, as developed by the testimony of those witnesses, must be summarized in some detail.

It seems that the plaintiff had given birth to a dead child at full term, following which she was delivered the care of a Doctor R. About six months after the delivery Doctor R. took her to Doctor G, the defendant, for consultation. He was given a history by the patient of pain on the left side for about three weeks and pressure upon standing which caused her to vomit. Doctor R, in giving his history, informed Doctor G of her blood pressure, and temperature which had been elevated. Thereupon Doctor G examined the abdomen, both externally and vaginally. Doctor G told the patient that she had a tumor about the size of a small grapefruit, the nature of which he would not know until he operated.

A few weeks Doctor G performed the operation which was contemplated. The hospital record indicated the preoperative diagnosis to be "tubo-ovarian abscess" and the postoperative diagnosis recorded by defendant was "retro-peritoneal sarcoma. Adhesions to iliac vessels, ureter, etc., are so dense as to make removal impossible." According to the testimony of the plaintiff she was told by the surgeon that he had been unable to do a great deal at the operation as he found it impossible to remove the growth, but that after recovery from the shock of the operation other methods of treatment should be

resorted to. The testimony of the mother of plaintiff indicated that she had witnessed the operation and had seen Doctor G take out two pieces of tissue from the tumor. It appeared from the records of the hospital that the pathologist had reported a diagnosis from laboratory examination of "cellular neurofibroma." It was conceded that the said condition was one kind of cancer.

A few weeks after the operation the plaintiff told Doctor G that she felt about the same as before the operation, and he then advised and arranged for deep x-ray treatments which were administered by another physician.

It seems that thereafter peritonitis developed for which an operation was performed, and that she was obliged to undergo treatments and care for "a bowel trouble" which she sustained. For these conditions several physicians cared for her, including a Doctor H and a Doctor J.

Doctor T, a roentgenologist, was called as a witness by the plaintiff, and stated that he had taken x-ray pictures of the patient about six months after Doctor G's operation. He said that he could not see any evidence of malignancy at the time, but conceded that x-ray treatments might have rendered it impossible to make such a reading of the x-rays, even though there might have been a previously existing condition of sarcoma. His testimony indicated that the principal methods of diagnosing sarcoma were the use of x-ray pictures, and of laboratory work.

Doctor H, when called as a witness, gave testimony that when he saw the patient he found no evidence of sarcoma, or of whether she had ever had sarcoma. He enumerated various approved tests in aid of such a diagnosis including biopsy, x-ray, and blood examinations.

The witness upon whom plaintiff chiefly relied as establishing a prima-facie case against Doctor G, was Doctor J. The latter contended that the plaintiff never had had a sarcoma and was critical of the diagnostic methods which the defendant had used. However, the Appellate Court in reviewing the case rejected the contention that he established a sufficient case for submission to the jury, saying in part concerning Doctor J:

"He criticized the procedural methods used by the defendant before advising an operation, claiming that all probability of the existence of a non-malignancy should have been eliminated by the use of various methods which he outlined, before performing an operation. But the insufficiency of that testimony, on the issue here, is that Doctor G did not diagnose the trouble as a malignancy, prior to the operation. On the contrary, his diagnosis was that the patient had an abscess. Doctor J says she did not have a sarcoma and Doctor G came to the same conclusion even though he didn't use all the tests which Doctor

J thinks he should have used to eliminate the probability of nonmalignancy.

We find no evidence to support an allegation that proper care was not taken in making the tentative diagnosis or that the recommendation of an operation after such diagnosis constituted malpractice, or that the operation was not performed in an efficient and professional manner."

In ruling out the contention that it was improper to advise x-ray treatments, the Court said

Plaintiff's evidence certainly does not tend to support any allegation that the employment of biopsy or reliance placed in laboratory diagnosis of malignancy constituted malpractice. On the contrary, it might be urged that he would have been guilty of malpractice if he had not had such microscopic examination made and given weight to the report.

'Doctor G's own postoperative diagnosis being that the plaintiff had a malignant growth, and that it was inoperable, and the microscopic test confirming the diagnosis, is there any testimony here that the use of x-ray treatments constituted malpractice? We find none. Plaintiff's witnesses testified to the contrary. Doctor T testified 'If there had been one (sarcoma) before the plaintiff had received this course of x-ray treatments,

it is possible it would have disappeared and I couldn't see it here'

"He also testified, as heretofore noted, that the tendency of x-ray treatments is to stop the activities and growth of malignant cells."

In directing that judgment should be entered in favor of defendant, reversing the ruling of the Trial Court which had been favorable to plaintiff, the Appellate Court summarized the general rules applicable to malpractice actions as follows

'A physician or surgeon is not a guarantor of the correctness of his diagnosis or of the efficacy of the treatments prescribed, but he is required to exercise the degree of skill and learning ordinarily possessed and exercised under similar circumstances by the members of his profession in good standing and to use ordinary and reasonable care and diligence and his best judgment in the application of his skill to the case. Negligence cannot be presumed from the mere failure to obtain the best results. To establish liability there must be competent testimony that there was lack of care or that approved procedure and methods were not followed and the general rule is that the negligence in the treatment which is claimed must be shown by medical witnesses called as experts, that it must come from those qualified by education, training and experience to give it'

### Treatment of Fractured Leg

A PHYSICIAN who specializes in orthopedic surgery was called to attend a woman about 45 years of age, who had sustained a fractured leg. He examined her and found her suffering from a fracture of the tibia and fibula involving the ankle joint. X-rays were immediately taken which confirmed the diagnosis and the evening of the same day under a general ether anesthetic the fracture was reduced by manipulation and a plaster-of-paris cast was applied from the toes to the knee. X-rays taken the next day showed the bones to be in good alignment and the patient progressed satisfactorily. She was discharged from the hospital during the fourth week.

At the end of six weeks the plaster-of-paris cast was removed and both position and motion were progressing favorably. The doctor advised the patient to begin light weight bearing with crutches and gradually to increase the same.

The patient following the removal of the cast returned to the doctor's office three times a week for physiotherapy treatments for a period of about eight weeks. The doctor found that the patient was refusing to bear weight on the injured leg and suspected her of saving the same for the purpose of maintaining the value of her claim against the party responsible for the original injuries.

The doctor last saw the patient about eight weeks after her discharge from the hospital at

which time she left the State of New York. When he last saw her he gave her a letter for her to present to any doctor subsequently caring for her in which he outlined the treatment he had rendered. Her condition at that time was satisfactory.

A malpractice action was instituted against the doctor two years and two months after he last saw the patient, in which the claim was made he had improperly reduced the fracture and cared for the leg so as to leave the bones in an improper position and to cause the foot to be displaced backward.

The defendant in answering the complaint denied all charges of malpractice and in addition pleaded the two year Statute of Limitations applicable to malpractice actions.

Prior to the time the case would be reached for trial, defendant's attorney attempted to obtain a bill of particulars of the complaint, requiring among other things the plaintiff to specify the dates of the alleged malpractice on the part of the defendant. At that point in the lawsuit plaintiff apparently realized that the action was in fact barred by the Statute of Limitations for no bill of particulars was served and the defendant obtained an order precluding the plaintiff from testifying with respect to the alleged negligence complained of and shortly thereafter the action was discontinued.

### ALUMNI DAY—NEW YORK UNIVERSITY COLLEGE OF MEDICINE

The Alumni Association of the New York University College of Medicine announces that the alumni day exercises will be held on

Washington's Birthday, February 22. The scientific program will be published in the February 15 issue.

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GEORGE W. CRAMP

**Midwifery.** By Ten Teachers. Under the direction of Clifford White, M.D. Edited by Sir Comyns Berkeley, Clifford White, and Frank Cook. Sixth edition. Octavo of 676 pages, illustrated. Baltimore, William Wood & Co., 1938. Cloth, \$6.00.

This book first appeared more than twenty years ago. The present volume is the sixth edition. It is primarily a text on obstetrics produced for students by the combined contributions of ten teachers of obstetrics in various London Medical Schools.

It is well and abundantly illustrated. The foundations of obstetrics are clearly and concisely presented in its 600 odd pages. The viewpoint is naturally English. Chloroform is recommended for the induction of general anesthesia during labor and also in eclampsia. The work is replete with statements of good common sense. For example, in the consideration of diet, antenatal, there is a discussion of the present-day tendency to lay great stress upon the special need for calcium, phosphorus, iron, and vitamins. The writer states, "Their administration is at least harmless, it is probably beneficial, and it is certainly fashionable."

The attitude toward cesarean section is conservative. The lower segment operation is described in detail, the transverse incision in the uterus is the preferred type of procedure.

The work is an excellent textbook for students preparing for examination. It will undoubtedly prove useful to many who have passed beyond the stage of examinations.

ONSLow A. GORDON

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue Brooklyn, N Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers.

## REVIEWED

**Tumors of the Skin Benign and Malignant.** By Joseph Jordan Eller, M D. Octavo of 607 pages. Illustrated. Philadelphia, Lea & Febiger, 1939. Cloth, \$10.

Here is a book which should find a place in the library of every surgeon as well as dermatologist. It would also be very valuable to the general practitioner, since it is, without question, a complete manual of information and procedure written by one whose study of the subject and wide clinical experience extending over many years insures its value and position as an authoritative work. In a single volume, splendidly illustrated with over 400 photographs and diagrams, Dr Eller has brought together the best thought of the present day and the fullest information concerning diagnosis and treatment with radium and x-rays, or whatever surgical procedure has proved superior in the treatment of the benign and malignant lesions of the skin. The chapter on the treatment of carcinomas is most comprehensive and discusses the several methods of therapy which may be used with diagrammatic example of tumors of various types, sizes, shapes, and locations showing very graphically the most advantageous arrangement of the radium applicators used. Precancerous lesions are well described and special emphasis is placed on the recognition and management of early malignant new growths.

One of the most valuable chapters is devoted to cutaneous surgery and plastic repair of skin tumors. The illustrations and diagrams elucidating the various procedures in surgical technique and skin grafting greatly enhance the value of the book.

An extensive appendix contains practical data on radiation physics and biology, including dosage tables and charts which aid in determining the proper procedure and the dose to be employed in the treatment of tumors of the skin.

Dr Eller has dedicated his book to his "friend and mentor," and the master of us all, Dr James Ewing.

NATHAN THOMAS BEERS

**Medicine of the Ear** Edmund P Fowler, Jr, M D, Editor. Quarto of 590 pages, illustrated. New York, Thomas Nelson & Sons, 1939. Cloth, \$12.

This comprehensive work on the medical aspects of ear disease is a welcome variation from the usual type of otologic textbook. Compiled by a distinguished group of specialists, it makes a fine, ready reference work. The looseleaf arrangement provides for additions from time to time.

The general standard of this book is high, the chapters on physiology and pathology deserve special mention.

The editor and his publishers are to be congratulated for having given us a new type of

text and reference work. The paper, print, and general arrangement are unusually good. This volume should be placed on the list of "musts" for those interested in the subject.

M C MYERSON

**The Wisdom of the Body** By Walter B Cannon, M D. Revised and enlarged edition. Octavo of 333 pages, illustrated. New York, W W Norton & Co, 1939. Cloth, \$3.50.

This volume discusses the relation of the autonomic nervous system to the self regulation of physiological processes. The word, homeostasis, is used to denote the stability of the body, that is, the coordinated physiologic processes which maintain most of the steady states in the organism. In the chapter on the Fluid Matrix, the blood and lymph are studied. Chapters on the constancy of the water and salt content of the blood, and chapters on the homeostasis of the blood sugar, proteins, fats, and calcium follow.

In discussing the constancy of body temperature, the thyroid gland is stated to be the most influential organ, the pituitary and adrenal cortex also being factors. Causes of heat production and heat loss are explained. This edition has a new chapter on The Aging of Homeostatic Mechanisms. Reduced rate of heat production as the individual grows older is found and also a lessened ability to adapt to external heat, especially in people who are fat. With advancing years there is also an impaired ability to use and store glucose and to maintain the acid base balance of the blood.

The account is based upon a series of fifty three publications from the physiologic laboratory of Harvard University with many other references.

WILLIAM E McCOLLON

**Life's Beginning on the Earth** By R. Beutner, M D. Octavo of 222 pages, illustrated. Baltimore, Williams & Wilkins Co, 1938. Cloth, \$3.00.

The question of the origin of life on this planet and its evolution through many stages to its highest culmination in man has always been a subject for speculation by philosophers and scientists. Some claim that life began on this earth while others believe with Arrhenius that life was brought to this earth from some other planet.

The author, himself a keen student of chemistry, set for himself the task of showing how chemistry can account for the beginning of life on this earth without the need of importing living cells from other planets, particularly if millions of years are allowed for the process to develop. By carefully chosen analogies gleaned from the chemical and physical sciences, Dr Beutner shows how all the known forces operating in

living organisms can be explained on the basis of known scientific facts. He also shows how the various configurations seen in the animate world can be duplicated by the study of crystal structures and growth.

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GEORGE W. CRAMP

**Midwifery.** By Ten Teachers. Under the direction of Clifford White, M.D. Edited by Sir Comyns Berkeley, Clifford White, and Frank Cook. Sixth edition. Octavo of 676 pages, illustrated. Baltimore, William Wood & Co., 1938. Cloth, \$6.00.

This book first appeared more than twenty years ago. The present volume is the sixth edition. It is primarily a text on obstetrics produced for students by the combined contributions of ten teachers of obstetrics in various London Medical Schools.

It is well and abundantly illustrated. The foundations of obstetrics are clearly and concisely presented in its 600 odd pages. The viewpoint is naturally English. Chloroform is recommended for the induction of general anesthesia during labor and also in eclampsia. The work is replete with statements of good common sense. For example, in the consideration of diet, antenatal, there is a discussion of the present-day tendency to lay great stress upon the special need for calcium, phosphorus, iron, and vitamins. The writer states, "Their administration is at least harmless, it is probably beneficial, and it is certainly fashionable."

The attitude toward cesarean section is conservative. The lower segment operation is described in detail, the transverse incision in the uterus is the preferred type of procedure.

The work is an excellent textbook for students preparing for examination. It will undoubtedly prove useful to many who have passed beyond the stage of examinations.

ONSLOW A. GORDON

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TOTAL MEMBERSHIP—JANUARY 1, 1940—17,010

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Genesee	E G Ribby	Byron P J DiNatale	Batavia P J DiNatale
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Livingston	G M Doolittle	Sonyea A J Townsend	Dansville A J Townsend
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Monroe	A D Kaiser	Rochester W A MacVay	Rochester J J Rooney
Montgomery	S L Homrighouse	Amsterdam R Conant	Amsterdam L M McGuigan
Nassau	E Calvelli	Port Washington E K. Horton	Mineola E K Horton
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Richmond	H A Cochrane	New Brighton G W McCormick	P't R'chm'd C J Becker
Rockland	R E Blaisdell	Orangeburg W J Ryan	Pomona D Miltmore
St. Lawrence	D M Mills	Gouverneur R J Reynolds	Potsdam L T McNulty
Saratoga	R B Post	Ballston Spa M J Magovern	Saratoga Sp'gs W J Maby
Schenectady	F L Sullivan	Scotia J H Naumoff	Schenectady C E Wiedenman
Schoharie	D W Beard	Cobleskill H L Odell	Sharon Springs D L Best
Schuyler	P F Willwerth	Montour Falls O A Allen	Watkins Glen O A Allen
Seneca	R F Gibbs	Seneca Falls D B Walker	Waterloo D B Walker
Steuben	R A O'Brien	Corning R J Shafer	Corning R J Shafer
Suffolk	J L Sengstack	Huntington E P Kolb	Holtsville G A Silliman
Sullivan	H Golembe	Liberty D S Payne	Liberty D S Payne
Tioga	C J V Redding	Owego I N Peterson	Owego I N Peterson
Tompkins	H J Wilson	Ithaca W Wilson	Ithaca W Wilson
Ulster	W S Bush	Kingston C L Gannon	Kingston C B Van Gaasbeek
Warren	H A Bartholomew	Glens Falls R S Mitchell	Glens Falls R S Mitchell
Washington	V K Irvine	Granville D M Vickers	Cambridge C A Prescott
Wayne	C Steyaart	Lyons J L Davis	Newark J L Davis
Westchester	H J Vier	White Plains R B Archibald	Bedford Hills J G Morrissey
Wyoming	G S Baker	Castile O T Ghent	Warsaw O T Ghent
Yates	A W Holmes	Penn Yan R F Lewis	Penn Yan R F Lewis

# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

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### A New State Journal

The *North Carolina Medical Journal*, whose first issue appeared in January, promises to make a distinguished contribution to medical journalism. Its attractive format shows a thorough understanding of the technical aspects of magazine-making. More important, its contents reveal a keen awareness of the functions and responsibilities of a state medical journal.

It is not enough for a state journal to act as a medium for the dissemination of scientific papers. That is part of its function, and an important part, but by no means all.

A state medical journal must educate in the broadest sense of the word. It must educate by a discriminating selection of the scientific articles it publishes. It must educate by a constant broadening of medicosocial consciousness in the profession.

The *North Carolina Medical Journal* apparently intends to do both. Its first issue contains a number of superior scientific articles. Its leading article, "The Doctor and Socialized Medicine," by J. Buren Sidbury, M.D., furnishes an excellent analysis of one of the leading medicosocial problems of our times.

The medical profession in North Carolina is apparently cognizant of the need for state intervention in certain aspects of medical care. It acknowledges the success governmental medical activities have had *within their legitimate sphere*. It does not, however, accept the thesis that the provision of general medical care to persons able to pay for such service comes within the legitimate sphere of state medical aid.

As Dr. Sidbury points out, political control of medicine lowers quality and increases costs. Where compulsory insurance is in force, preventive medicine has lagged and malingering and hypochondria increased. Mutual mistrust impairs the relationship between patient and physician, inhibiting intimate revelations on the



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Monroe	A D Kaiser	Rochester	J J Rooney
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Nassau	E Calvelli	Port Washington	E K. Horton
New York	W P Anderton	N Y City	K Dwight
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Wayne	C Steyaart	Lyons	J L Davis
Westchester	H J Vier	White Plains	R. B Archibald
Wyoming	G S Baker	Castle	O T Ghent
Yates	A W Holmes	Penn Yan	R F Lewis

to continue to use Under the new regulations a prescription bearing no notation to the contrary may be renewed indefinitely, subject to the pharmacist's discretion When it is not advisable for a patient to take more than the indicated quantity without further consultation, the physician has only to put "not to be refilled" on the order form

Rule No 30 steers a middle course between the extremes of unrestricted and no refills It is a common-sense remedy for an abuse that has reached serious proportions, threatening to create widespread addiction to a potentially dangerous group of drugs

### Urolithiasis from Sulfapyridine

The dramatic action of sulfapyridine on the course of pneumonia is in itself an outstanding tribute to chemotherapy However, during the short time that this drug has been in extensive use, an increasing number of dangerous sequelae have been reported in the literature which support clinically the experimental work of Antopol and Robinson<sup>1</sup> and of Gross, Cooper, and Lewis<sup>2</sup> The former noted the formation of urinary concretions in various portions of the urinary tract of rats, rabbits, and monkeys following the administration of the drug The latter, working on the same therapy for pneumonia, found that over 60 per cent of their animals developed calculi, accompanied by varying degrees of obstruction, hematuria, pyelonephritis, and a high nitrogen content in the blood Pathologically, there were noted albuminous degeneration of the tubular epithelium and dilatation of the ureters and of the renal pelvis The chemical composition of the deposits was found to be acetyl-sulfapyridine, and the calculi varied in color from a grayish white to a pale yellow

Keen,<sup>3</sup> in reporting 2 cases of sulfapyridine urolithiasis, draws attention to the aspects that this problem presents in humans "For a pneumonia patient to recover overnight, as it were, and then to be precipitated into an acute abdominal syndrome is an unpleasant aftermath for the patient as well as his physician" Acute renal obstruction, red blood cells and casts in the urine, and severe attacks of lumbar pain speak for caution in the use of this drug lest these concretions form the nucleus for a permanent stone Keen feels that the marked dehydration present in pneumonia coupled with the limited solubility of sulfapyridine may be the responsible factors in the production of calculi

Complications of such gravity following the use of any drug war-

<sup>1</sup> Antopol W and Robinson H Proc. Soc. Exper Biol. & Med. 40 428 (1939)

<sup>2</sup> Gross P Cooper F B and Lewis M Urol & Cutan. Rev 299 (May) 1938

<sup>3</sup> Keen M R. New York State J Med. 40 83 (Jan. 15) 1940

former's part For want of time and personal interest, diagnostic methods become superficial and treatment mechanical Graduate medical education is neglected and the standards of professional service gradually fall

Where the low-income classes have been without facilities for medical care or have had access to only the lowest forms of contract practice, compulsory sickness insurance *may* represent an improvement In this country, however, with widespread facilities for medical care and a high order of personalized service available to most of the population, the sort of treatment obtainable under obligatory insurance would be a distinct retrogression Today there is less reason than ever for adopting this method since organized medicine is sponsoring plans for the extension of "quality" medical care to all classes

Dr Sidbury's article proposes concrete remedies for concrete ills He accepts the principle of federal financial aid to provide medical care for the underprivileged but defines the conditions under which such aid is acceptable and produces the best results At the same time he debunks much of the propaganda for state medicine If his article reflects the policy of the *North Carolina Medical Journal*, this newcomer seems destined to assume an important place among state medical publications

### Control of Sedatives

Rule No 30 in the new State Sanitary Code places a necessary curb on over-the-counter sales of hypnotic and somnifacient drugs Heretofore many such drugs have been available to the public without a physician's prescription and old prescriptions could be refilled without reference to the issuer's needs As a result, there has developed an excessive reliance on sedatives and somnifacients, almost rivaling the prevalent abuse of laxatives

The new regulations put an end to indiscriminate over-the-counter sales without preventing reasonable lay access to these drugs Rule No 30 provides as follows

"No hypnotic or somnifacient drug intended for internal use shall be sold at retail or dispensed to any person except upon the written prescription of a physician, a dentist or a veterinarian, and the prescription shall remain on file in the pharmacy where compounded Such prescription shall not be refilled if it bears indication by the physician, the dentist or the veterinarian that it is not to be refilled "

The last sentence answers the objection of those who argue that a patient should not be obliged to visit his physician every time he desires to renew a prescription which is safe and desirable for him

insect and animal carrier of disease still exist " Shall we will this Earth to them as their own or shall we, as physicians, continue to aid in preserving it for humans so that *Future*, as defined in the lexicons, will really mean something to our coming generations!

### Current Comment

"How good it is that there is still light and peace and hope in the hearts of men somewhere in this trembling world! How good that here among us, the State will apparently spare us yet a little while to walk as men, to speak gently and to save our passions for the tasks of devotion and of love.

"But lest the lamps of freedom, of tolerance, of human kindness be extinguished here, lest the dignity of man give way even on this young soil to the dark terror of the brute that lurks in hungry masses, we must be alert The New Year will be a happy one only as we count our true blessings and join hands to shield the fragile flames within those lamps from the cold winds that blow about us this January 1940"—Greeting from the January issue of the *Westchester Medical Bulletin*

"I don't think these tactics will do any good There is no way of fooling the American Medical Association I think the Senator's bill was drafted largely to ensnare the doctors"—Abraham Epstein, Executive Secretary, American Association for Social Security, testifying before the Senate Committee on Labor and discussing the Wagner National Health Bill

"The medical profession in solid usefulness has far outstripped the legal profession I used to glory in the legal profession But it is a sad fact that that wonderful profession that has in its tradition a host of great men—that great profession—by some subtle influence is steadily deteriorating Law is not a science now

And let me speak a word of warning to you Very much the same influences that strike at the legal profession are be-

ginning to look at you, at socialized medicine, regimentation of you doctors is imminent. Before you know it that freedom you glory in will be suddenly swept away and you will be regimented into a mere body of base practitioners"—Judge Stewart, of Pittsburgh, quoted in the Easton (Pa.) *Express* recently

"In contrast with the *revolutionary* proposals of the Federal officials is the *evolutionary* platform of the American Medical Association " "The well-rounded practitioner is both an *introvert* with a confidence in his own ability, in his private practice, and an *extrovert* in his relations with his fellow practitioners and the public generally"—Two sound comments from the January issue of the *Journal of the Medical Society of New Jersey*

"The years that have vanished into oblivion, and are dead, and the days of our own, so widely divergent in time and space, differ little. The past had its quacks and we have ours now For duodenal ulcer a magnesium sulfate 'mineral water', for gynecological affliction, be it cervicitis, perineal tears, retroversion, neoplasm—benign or malignant, just take Lady Abigail's medicine, and for fatigue, for nervous exhaustion, in fact for constitutional vagotonia, ah, we have it! A cigarette, but only of a certain kind Another make and you're ruined Brazenly and openly, speaking to millions through radio and newspapers, fake nostrums are advocated for colds and coughs, for weakness Weakness, one of the signs of cancer, of tuberculosis, of pernicious anemia. How many graves do these swindlers dig a year?"—Plain speaking in the *Roche Review*

rant serious consideration. There comes to mind the glowing reports of the efficacy of dinitrophenol in obesity and the wave of cataracts that followed its use. Does it not seem advisable to advocate restraint in the use of sulfapyridine to such cases as do not respond to other proved forms of treatment? Is it advisable that the expectation of the "crisis" be shortened from seven days to one, and then turn a medically sick patient into a potential surgical risk?

Despite the enormity of this problem it takes self-control, brined in stoicism to refrain from commenting facetiously upon the currently popular conception that adequate medical care can be obtained only by the collaboration of several specialists in diverse fields on a given case. Who would have thought that the time would come when a urologist, cystoscope in hand, becomes a necessary adjuvant to the *proper* management of "a guy dat's sick wid pneumonia?"

## Doctors and War

The war abroad grieves us deeply. That problems, no matter what their nature may be, cannot be settled amicably over a conference table seems incredible to minds that function maturely. To us physicians, whose souls are devoted to the conquest of those minor forms of life which daily threaten our existence—bacteria, molds, vegetable and animal parasites, and the so-called viruses, this wanton destruction of men by men appears to be a concerted effort of humanity to relinquish our planet to the progeny of the *snake* that enticed Eve.

We have mastered the immediate problems of the sicknesses which are peculiar to mass concentrations of human beings from all walks of life. Typhoid fever, diphtheria, smallpox, and those diseases innate to war, such as tetanus and gas gangrene, can be controlled to an extent that will give us a minimum in both morbidity and mortality. Trench mouth and trench fever can be remedied satisfactorily. Plastic surgery has advanced to a stage where the most disfiguring wound can be repaired so that the injured may again resume his former status in civil life.

But something is left for which even we physicians have as yet no solution—the postwar epidemic. Those of us who remember the tragedy and horror of the "Spanish Flu" epidemic, during the years 1918 to 1921, which followed immediately upon the termination of the last World War, are alert to the possible epidemic diseases which the current war will bring in its train. "The louse<sup>1</sup> that spreads typhus fever, the rats concerned with plague, and many another

<sup>1</sup> JAMA 113 1230 (1939)

# PRESENT TRENDS IN THE TREATMENT OF PNEUMONIA IN CHILDREN

WILLIAM C. EMM, M. D., Syracuse, New York

PNEUMONIA is one of the leading causes of death and as such presents a definite health problem to every community. Since its first isolation by Pasteur and Sternberg, and since the pneumococcus was proved to be the cause of pneumonia by Fraenkel, this disease has been the subject of intensive experimental and clinical research. As a result of this research the mortality from pneumonia is gradually being lowered. There are several milestones already passed on our road toward a reduction of mortality. First, the prevention of pneumonia which follows the proper management of upper respiratory infections. Second, the introduction of the oxygen tent in the early twentieth century was the culmination of the work of Thomas Beddoes who founded the Pneumatic Institute for the treatment of diseases by inhalation in 1798, and Waldenburg who revised this plan in 1873 and established a differential type of pneumotherapy. In 1897, a third milestone was passed when Washbourn immunized a horse and used the serum in the treatment of pneumonia. This offered protection against some pneumonias but did not seem to influence others. This is one of the earliest observations of the immunologic differences between strains of pneumococci. It led to the discovery of the importance of distinguishing the various strains comprising the pneumococcus group.

The introduction of a potent type specific serum for each strain isolated was the next logical step. Rabbit serum was discovered while attempting to overcome some of the difficulties encountered in the use of horse serum.

In 1935, Domagk demonstrated a drug known as sulfanilamide. Primarily intended for the treatment of hemolytic

streptococcal infections, this drug was noted to have some effect on certain types of pneumococci. Further investigation of sulfanilamide has led to the discovery of M & B 693, or sulfapyridine in 1938.

The evaluation of each of these methods of treatment, or a combination of these methods must, in the final analysis, be determined on a statistical basis. This is particularly true of pneumonia because the individual case need follow no exact pattern and there is no means by which its future course can be accurately determined.

My report of pneumonia extends over a period of four and a half years, from July, 1934, to February, 1939. It consists of an analysis of 515 consecutive cases of pneumonia in children admitted to the Syracuse Memorial Hospital. Only proven cases of pneumonia (consolidation, rales, bronchial breathing, x-ray or fluoroscopy, postmortem examination) were used for this report.

The majority of the children came from poor homes where the lack of proper food and care resulted in a lowering of the child's resistance to all types of infection. Past histories of repeated upper respiratory infections were frequently elicited. Thus it was not surprising to find that the common cold or some allied form of upper respiratory infection was the leading predisposing cause of these pneumonias. Webster and Hughes (1931) have shown that it is possible to isolate a pure culture of pneumococci from the nasal secretions during some phase of every common cold occurring in a child. Every cold then is a potential case of pneumonia, depending upon the type of pneumococcus in the nasal secretions, its power to invade the body, and the child's resistance to the particular type involved. Congenital

*Read at the Annual Meeting of the Medical Society of the State of New York, Syracuse, April 26, 1939*

"The National Grange is strongly opposed to socialized medicine. At its annual convention in Peoria, Ill., this organization of 1,000,000 farm people went on record as opposing the fundamentals of the Wagner Health Bill now pending in Congress. Without debate it adopted the following resolution:

"We oppose any form of socialized medicine which would be administered by any branch of government, regardless of the cooperation or interest of those for whom the service was provided. This is not opposition or condemnation of cooperative efforts for providing medical care by the people themselves. The Grange is not opposed to voluntarily cooperative plans for medical care, but it does oppose any plan to make the Federal Government supreme in the field of medical care. It believes, as many others do, that this would result in a meddlesome federal bureaucracy and a lowering of the standards of medicine.' And when the matter is given thoughtful consideration only a small percentage of people in any walk of life will look with favor on such

proposals as the Wagner Health Bill'—The St. Louis *Daily Globe-Democrat* of December 3, 1939

" 'Doctors are poor business men.' This statement has often been made, and is a charge that, in my opinion, we will not attempt to palliate or deny, since most of us know that when a physician becomes a good business man he often ceases to be a good medical man"—A statement by Ralph B. Todd, M.D., former president of the Westchester County Medical Society.

"Were all men built to a stock pattern so that they responded to physical agents or bacterial infections in regular fashion according to their peculiar constitution, the practice of medicine would be a simple business. All men, however, are like contrary women of whom the comedian sang 'You never see two alike any one time and you never see one alike twice'."—*Quincy Medical Bulletin*, recently

## Prize Essays

The Merrit H. Cash Prize and the Lucien Howe Prize will be open for competition at the next Annual Meeting of the Medical Society of the State of New York, May 6, 1940.

The Lucien Howe Prize of \$100 will be presented for the best original contribution on some branch of surgery, preferably ophthalmology. The author need not be a member of the Medical Society of the State of New York.

The Merrit H. Cash Prize of \$100 will be given to the author of the best original essay on some medical or surgical subject. Competition is limited to the members of the Medical Society of the State of New York, who at the time of the competition are residents of New York State.

The following conditions must be observed:

Essays shall be typewritten or printed and the only means of identification of the author shall be a motto or other device. The essay shall be accompanied by a sealed envelope having on the outside the same motto or device and containing the name and address of the writer.

If the committee considers that no essay or contribution is worthy of the prize, it will not be awarded.

All essays must be presented not later than April 1, 1940, and sent to the Chairman of the Committee on Prize Essays of the Medical Society of the State of New York, 2 East 103rd Street, New York City.

EUGENE H. POOL, M.D., Chairman, Committee on Prize Essays

TABLE 2

Yr	Type	Types																		X	No Pneum	
		1	2	3	4	5	6	7	8	10	13	14	15	16	17	18	19	21	23			28
1934-1935	Lobar	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1	—	
	Broncho	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	—	
1935-1936	Lobar	6	—	3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	4	
	Broncho	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6	6	
1936-1937	Lobar	8	—	—	—	—	—	3	—	—	—	—	—	—	—	—	—	—	—	25	15	
	Broncho	—	2	2	—	—	—	1	1	—	—	—	—	—	—	—	—	—	—	15	44	
1937-1938	Lobar	22	—	2	—	11	3	4	1	—	—	7	—	—	—	—	—	—	—	29	2	
	Broncho	—	—	—	—	1	3	1	1	—	—	2	—	—	—	—	—	—	—	33	2	
1938-1939	Lobar	19	1	2	—	—	—	1	—	—	1	2	—	—	—	—	1	—	—	9	—	
	Broncho	1	1	1	1	—	1	1	2	1	—	4	1	1	2	2	2	1	2	1	6	
Total		56	4	10	1	12	8	10	5	1	1	15	1	1	2	2	3	1	2	1	132	73

cal mastoiditis occurred in 6.4 per cent of the cases. Next in frequency was empyema in 6.6 per cent of the cases. The complete list of complications is given in Table 3. Recovery from pneumonia without complication of any sort was noted in approximately 60 per cent of the cases in this series. Complications were noticeably fewer in the serum-treated cases and usually, when they occurred they were present before the serum was administered.

There were 79 deaths in this series, a mortality of 15.4 per cent. This is compared with other series of pneumonia recently published (Table 4). The mortality of routinely treated cases was 15.6 per cent. The mortality of serum-treated cases was 5 per cent. There were 4 deaths in the 8 cases of tuberculous pneumonias. An analysis of the deaths shows that 32 cases were complicated by some other pathology in addition to the pneumonia. In Table 5 further analysis shows that 85 per cent of the deaths, or 68 cases, occurred in children 2 years of age or younger. One is impressed by the large number of cases which were not typed. Typing was not an established procedure during the first two years. Omission of typing during the last two years was because of the poor condition of the patient, making it impossible to pass a stomach tube. Group X, next in frequency, contains the higher types of pneumonia for which no specific serum was available. Five deaths were noted in types for which serum was available. Two of these received serum. The treatment of the pneumonias was both general and specific. General or routine treatment was given 467 cases in this series.

TABLE 3

Complication	1934-1935	1935-1936	1936-1937	1937-1938	1938-1939	Total
Otitis media	35	15	35	23	7	115
Surgical mastoid	1	2	5	—	—	8
Empyema	10	3	9	8	4	34
Lung abscess	1	2	—	—	—	3
Unresolved	1	1	3	—	—	5
Meningitis	4	1	—	1	—	6
Peritonitis	2	—	—	—	—	4
Pericarditis	—	—	—	2	—	2
Acute nephritis	—	2	2	2	1	7
Pyelitis	—	—	2	—	—	2
Erysipelas	—	—	1	—	—	1
Osteomyelitis	—	—	—	1	—	1

TABLE 4

Author	No of Cases	Lobar	Broncho	Not Determined	Mortality %
Plummer, Raia et al	147	105	35	2	17.7
A. J. Dis Child, 40:557					
Bullowa	539	386	153	—	15.4
A. J. Dis Child, 53:22					
Nemir	1,033	758	230	45	18.0
A. J. Dis Child, 51:1277					
Bullowa	1,000	668	331	1	17.0
Pub. Hel. Rep, 51:1076					
Memorial	515	254	253	8	15.4

It consisted of isolation in a pneumonia unit with a permanent nursing staff, adequate fluid intake by mouth supplemented by hypodermoclyses or intravenous solutions, adequate rest, oxygen therapy for labored breathing, and the symptomatic relief of cyanosis. The majority of the cases treated in this manner were classified as Type X or the higher types for which there is no specific treatment generally available.

Specific serum therapy was used in 40 cases. They included those types for which serum is supplied by the state laboratory, namely Types 1 and 2. In Types 5 and 7 horse serum and rabbit serum were also used. The number of cases treated with serum is, as yet, too few to offer a suitable comparison with



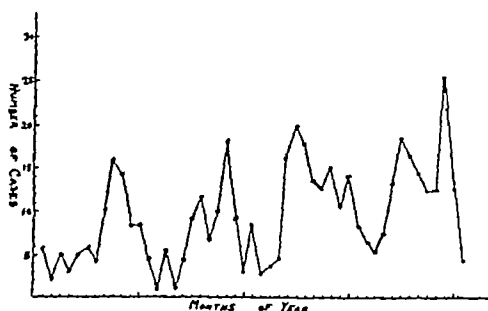


FIG 1

heart disease of all types, the contagious diseases, measles, whooping cough, and chickenpox, diarrhea specific and non-specific, asthma, and eczema were predisposing factors in this series. Three cases followed tonsillectomy and 1 followed an extensive burn.

The majority of the cases were treated during the winter and early spring months (Fig 1). In the first two years, single waves of increasing incidence occurred in the early spring months. The last two years were marked by two waves occurring in midwinter and early spring. The distribution of cases according to type and various age groups is shown in Table 1. The cases are nearly evenly divided between lobar and bronchopneumonia. Most of the pneumonias occurred in children 2 years of age or under and were predominantly bronchopneumonia. The lobar pneumonias were more prevalent in the older age groups. There were 8 cases of tuberculous pneumonia.

Sputum typing should be a routine procedure in all cases of pneumonia regardless of age. In small children there are several methods which may be used to collect a satisfactory specimen. If the child is old enough to cooperate, he may be able to cough and raise a representative bit of pulmonary secretion. Simple tickling of the throat may aid in bringing up the sputum. A throat swab culture may be used but this is subject to criticism for, while it may produce the causative organism, it may give an organism normally found in the child's throat playing no part in the infection. The easiest and most reliable method is simple aspiration

TABLE 1

Pneumonia	Up to 2 Yrs Age	2-5 Yrs Age	5-15 Yrs Age	Total
Lobar	87	68	99	254
Broncho	180	44	19	233
Tuberculous	4	2	2	8
Total	281	114	120	515

of the stomach contents. The tendency of every child to swallow secretions, particularly those raised during spells of coughing, makes this procedure almost infallible. Failures with this method are most often associated with small amounts of sputum highly diluted with stomach contents, making it difficult to find the pneumococci. Aside from the factor of dilution, the nature of the stomach contents does not affect the procedure of typing. Routine blood culture may at times yield an organism for typing which may be used to confirm the results of sputum typing.

All of the typing in this series was done by the Neufeld method at the City Laboratory, under the supervision of Dr O D Chapman. This method of typing is based on the fact that the capsule of the pneumococcus becomes swollen in the presence of its homologous serum. Very little typing was done the first two years of this survey. Thereafter it was a routine procedure. At that time the laboratory was typing only for Types 1, 2, 3, 5, 7, 8, and 14 with other types designated as Group 4 or X. In the past six months the typing has been extended to include all of the thirty-two known types. The results of our typing are shown in Table 2. Types 1, 5, and 14 were predominant for the series. Types 14, 6, and 3 predominated in the younger age group while Types 1, 5, and 7 were more common in the older age groups. The difficulties encountered in typing often lie in obtaining the type of pneumococcus which is the causative factor. This is illustrated by the following two examples. In the first case, four attempts at typing gave 16 and 17, 18 and 23, 28, 18. The second, on three attempts gave 10-17-15 1-8-14, and then became negative. Interpretation of such results is extremely difficult. The leading complication was otitis media, occurring in 23.6 per cent. Surgi-

4. The general use of sulfapyridine in the treatment of pneumonia must await further clinical and experimental research

## References

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But unfortunately for purposes of comparison our series is rather different from Dr Emm's in that there are included in it all children showing autopsy evidence of pneumonia as well as the clinical cases, and since a very high percentage of infants have a terminal pneumonia regardless of the primary cause of death, our mortality figures appear high. One point which our survey brought out very clearly is the necessity of running a coincident control series of cases when attempting to estimate the value of therapy in pneumonia. Our mortality figures for the five years from 1933 to 1938 were successively 40, 33, 32, 29, and 21 per cent. We are unable to account for this progressive decline in mortality because during this period there was no change in our methods of treatment. It shows the fallacy of comparing the statistics of one year with those of another.

For this reason we are now testing the value of sulfapyridine by using it on alternate admissions. We were fortunate in receiving a complimentary supply of this drug from the start and thus far we have treated 24 cases of pneumonia with a similar number of controls. This is a very small series but our impressions might be of interest.

The patients in the sulfapyridine group almost invariably showed a drop in temperature within twelve to thirty-six hours after commencing the drug. This made the duration of the disease two days shorter than in the control group. Coinci-

dent with the drop there was also clinical improvement. Several children vomited repeatedly for twelve to twenty-four hours but this ceased although administration of the drug was being continued. In this small series we saw no other toxic effect except mild cyanosis. In short our series would fit perfectly with the beautifully controlled group of cases recently reported from Cincinnati in the *Journal of the American Medical Association* which you have all doubtless read.

In 2 of our cases, sulfapyridine seemed to exert no effect, and a recent paper in the *Lancet* by McLean, Rogers, and Flemming offers an explanation for this. They report a method for testing *in vitro* the sensitivity of a strain of bacteria to sulfapyridine, and by this method pneumococci have been found to vary enormously in their sensitivity to the drug and this variation is not associated with the type of pneumococcus but with the individual strain. But what was most interesting, as well as surprising, was the discovery that a single dose of pneumococcus vaccine given to mice or rabbits profoundly affects the course of an experimental infection in these animals when treated with sulfapyridine. A strong case is made out for the combined use of vaccine and sulfapyridine in pneumonia in man.

It has also been shown that pneumococci in infected animals readily establish a tolerance or fastness to the drug, and this experimental evidence should be made use of in treating patients by giving large initial doses so that the destruction of the bacteria may be complete before they have established tolerance to the drug.

Perhaps the best test we have of the effect of a drug on the pneumococcus is a case of pneumococcus meningitis, which is to all intents and purposes a human test tube in which the effect of a definite concentration of the drug can be determined by studying the spinal fluid. It cannot be an accident that the last two examples of this disease that I have seen are the only two that were treated with sulfapyridine and are also the only two who got well. In one of these the spinal fluid was promptly rendered sterile and while the concentration of the drug in the spinal fluid varied from 6 to 8 mg per cent it remained sterile. When the concentration fell to  $2\frac{1}{2}$  mg per cent there was a recurrence which was promptly cured when increased dosage pushed the level above 6 mg again.

However, in this case enormous doses were given. Ordinarily the concentration of sulfapyridine was between 1.0 and 2.5 mg per cent, which is less than half the concentration we usually find in the blood of children treated with sulfa-

TABLE 5

Year	No Cases	No Deaths	Mortality %	Deaths Under 2 Yrs	Deaths Over 2 Yrs	Not Typed	No Pneumo cocci	Type X	1	Types 3	5	T B
1934-1935	87	28	32 1	24	4	24	—	3	—	—	—	1
1935-1936	83	21	25 3	17	4	14	1	3	1	1	—	1
1936-1937	138	13	9 4	13	0	4	1	4	2	—	—	2
1937-1938	148	15	10 1	12	3	8	1	4	—	—	2	—
1938-1939	50	2	3 4	2	0	1	—	1	—	—	—	—

those treated routinely. The results with serum, however, give some indication of the usefulness of this type of therapy. Serum offers the greatest benefit in the age group of 2 years or under, where 1 out of every 4 cases dies. Unfortunately many of these cases are caused by types of pneumococci for which there is no acceptable serum for general use. However, all cases in this group of a type with available serum should be given the benefit of the serum. In the older age groups in this series the mortality of routinely treated cases was 5 per cent. The use of serum in these older age groups is a debatable question and should be employed in selective cases. A positive blood culture, a severe toxemia, a rapidly spreading pneumonia, or a cardiac condition are factors determining the selective use of serum for this group. Five deaths are noted in types for which serum was available. Two of these, both Type 5, received large doses of serum without result. The 3 cases of Type 1 were seen late in the course of the disease and no serum was given. One apparently recovered from pneumonia only to die suddenly of circulatory failure, acute endocarditis complicated the second, and the third died of empyema.

We have had an opportunity to observe the use of sulfapyridine in several cases of pneumococcal infections in children. I am indebted to Dr. H. Van Zile Hyde for permission to present a part of this work, a detailed report of which will be published at a later date by Dr. Hyde. Sulfapyridine is a white crystalline solid, soluble in water 1-1,000. It is active in relatively small doses and reported to be less toxic than sulfanilamide, although proof of this fact depends upon a longer clinical test of the drug. It is as effective as sulfanilamide against the hemolytic

streptococcus and meningococcus but possesses a greater effectiveness against pneumococcus. Reports so far available show the drug to be most effective against Types 1, 7, and 8, although it offers considerable protection against 2, 3, and 5. Type 1, 3, 14, and 18 infections occurring in children have been given this drug. No calculated dosage was given, the clinical picture determining the dose and the length of time the drug was given. Two untyped pneumonias in premature infants were also treated. The results in these cases were striking, each showing a quick response to the drug with termination of the infection. Two failures have occurred, one a Type 1 meningitis, the other a Type 27 endocarditis. Neither case showed any response to the drug. Vomiting, a slight cyanosis, and an itching of the eyes have been the only untoward signs noted during the administration of the drug. The number of cases is too few to draw any definite conclusions. When added to reports already published it would seem to indicate that sulfapyridine is an effective chemotherapeutic agent in the treatment of pneumonia and may revolutionize the entire treatment of this disease. Only prolonged careful study with accurate and complete clinical reports will answer this question.

### Summary

1. A series of pneumonias in children has been reviewed as to incidence, predisposing causes, complications, and methods of treatment.

2. Serum should be employed in all patients 2 years of age or under whenever possible.

3. Serum should be employed in selective cases in older age groups of children.

4 The general use of sulfapyridine in the treatment of pneumonia must await further clinical and experimental research

### References

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nilamide And yet these much smaller levels seem to be effective in the case of sulfapyridine

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Sulfapyridine promises to be helpful in the type of pneumonia for which a specific serum has not been available, so-called bronchopneumonia, pneumonia following measles and pertussis. The drug should be used in these cases

The administration of sulfapyridine is relatively safe The reactions are usually not severe. The earlier the drug is given the quicker the results This means that a definite diagnosis of pneumonia cannot always be made. If, however, pneumonia can be prevented in some treated cases it is justifiable to use sulfapyridine even when the indications are not absolutely clear

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An outbreak of scarlet fever in Hornell in October was traced to raw milk

# THE USE OF AMPHETAMINE (BENZEDRINE) SULFATE IN ALCOHOLISM WITH AND WITHOUT PSYCHOSIS

EDWARD C. REIFENSTEIN, JR., M.D., and EUGENE DAVIDOFF, M.D.,  
Syracuse, New York

(From the Department of Psychiatry, Syracuse University College of Medicine, and from the Syracuse Psychopathic Hospital)

IN JANUARY, 1936, we began an investigation of the stimulating action of amphetamine (benzedrine) sulfate on abnormal mental states characterized by depression or self-absorption. Certain toxic depressive states due to alcohol were included. We observed that the alcoholic cases were among those most favorably affected, and in October, 1936, we reported<sup>1</sup> a beneficial response in 6 of 7 cases with a history of more than moderate alcoholic indulgence.

In May, 1937, we presented<sup>2</sup> a comparative study of 55 depressed and self-absorbed patients, and stated that the most consistent improvement was obtained in the alcoholic cases. These observations lead us to investigate a series of 28 cases with acute alcoholic psychoses of recent onset. The definite, and, at times, marked acceleration of improvement which was observed in 93 per cent of these patients was recorded in the preliminary report published in May, 1938.<sup>3</sup> We also found a more satisfactory response in states of intoxication brought on by alcohol in which no psychosis was demonstrable and in the depressive after-effects of alcoholism. Subsequent comparison with the response of other psychiatric conditions<sup>4,5</sup> has served to emphasize the relative effectiveness.

In the present communication we have extended our study to a series of over 100 cases of alcoholism with and without psychosis and have compared the results with a comparable series of consecutive cases that did not receive amphetamine sulfate. For purposes of convenience, we have grouped the case material in five subdivisions: (1) acute alcoholic

psychoses, (2) protracted alcoholic psychoses tending toward deterioration, (3) without psychosis acute intoxication, (4) without psychosis chronic alcoholism involving addiction, and (5) alcoholic states complicating other mental illness.

## Method

As soon as a patient in an alcoholic state was admitted to the hospital, he was subjected to a thorough physical and mental examination and was given amphetamine sulfate unless the medication was contraindicated by reason of severe hypertension or cardiac disease. The dosage was usually 20 to 30 mg. daily as a single dose, and the drug was administered orally, intravenously, or at times by both routes. Unpleasant and untoward reactions were negligible for the most part. All other medications and procedures were omitted deliberately. The physiologic and the psychologic status of the patient was observed at frequent intervals according to methods previously reported.<sup>2,6,7,8,9</sup> After an interval of observation, the patient was presented at a staff conference and an official diagnosis was established following the classification of the American Psychiatric Association. The disposition of the patient was then determined. In most instances, amphetamine sulfate was continued throughout the residence of the patient in the hospital. Upon discharge, whenever possible, the patient was referred to the outpatient clinic to continue medication.

In an estimation of the influence of the drug in these cases, consideration was given to (a) the opinion of the staff members who were unaware of the medica-

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TABLE 2—RAPIDITY OF IMPROVEMENT IN CONSECUTIVE TREATED AND CONTROL CASES OF PATHOLOGIC INTOXICATION

Amphetamine Sulfate Cases				Control Cases			
Case Number	Period for Recovery in Days	Period for Transfer to Convalescent Ward in Days	Period for Discharge from Hospital in Days	Case Number	Period for Recovery in Days	Period for Transfer to Convalescent Ward in Days	Period for Discharge from Hospital in Days
1	1	2	12	1	3	3	8
2	2	6	8	2	6	6	13
3	2	6	17	3	6	6	19
4	3	3	13	4	7	4	18
5	3	3	25	5	9	6	21
6	3	5	9	6	9	7	26
7	3	7	14	7	9	7	33
8	3	8	16	8	10	4	24
9	4	4	11	9	10	7	13
10	7	3	18	10	13	5	23
11	10	7	23	11	13	10	17
12	11	7	19	12		Committed	
Average	4 3	5 0	15 4	Average	8 6	5 9	19 5

to consider him psychotic because of the rapid improvement of the mental state

It is likely that some cases would have been classified as pathologic intoxication rather than as without psychosis had they not received amphetamine sulfate. Statistically, this seems apparent in Table 3. The percentage of cases diagnosed as pathologic intoxication decreased from 20 per cent in the control period to 15 per cent in the amphetamine period at the same time that the cases classified as without psychosis increased from 26 to 36 per cent.

Favorable results were observed also in the cases of delirium tremens. This is indicated in Fig 1. The drug was most effective in cases of recent onset. However, greater care was necessary in the selection of patients for treatment because of the organic alterations that accompanied the more protracted cases. The frequent occurrence of complicating physical conditions such as pneumonia or vitamin deficiency necessitated additional caution. For these reasons our amphetamine treated cases represent a selected group. When compared with a similarly selected control group of consecutive admissions, the length of time for recovery in the treated cases was found to be decreased by more than half. In considering these results, recognition must be given to the fact that certain of the cases received other medication such as paraldehyde, barbiturates, and even morphine, prior to admission, and that a synergistic or antagonistic action of these

TABLE 3—VARIATIONS OF DIAGNOSTIC GROUPINGS IN TREATED AND CONTROL CASES

Diagnostic Group	Control Period (1937 to 1938)		Amphetamine Sulfate Period (1938 to 1939)	
	Num-ber	Per-centage	Num-ber	Per-centage
Pathologic intoxication	15	20 3	13	14 8
Delirium tremens	11	14 9	17	19 3
Acute hallucinosis	4	5 4	6	6 8
Korsakow's	8	10 8	2	2 3
Deterioration including paranoid, pseudo-paresis, etc.	17	22 9	18	20 4
Without-psychosis alcoholism	19	25 7	32	36 4
Total	74		88	

drugs with amphetamine is conceivable in these cases.<sup>9</sup>

The results of treatment with amphetamine sulfate in the patients with acute hallucinosis, while moderately favorable, were not as striking as those of the two previous diagnostic groups. At the same time a comparison with a similar control group of consecutive admissions revealed that 3 of 8 control patients were committed while only 1 of 8 amphetamine patients required further institutionalization. The less favorable response in acute hallucinosis is partially explained in another communication by one of us (Davidoff<sup>10</sup>) on the basis of the inadequate personality frequently encountered in this group.

**2 Protracted Alcoholic Psychoses Tending Toward Deterioration**—The results of the use of amphetamine sulfate in patients with Korsakow's psychosis, while less impressive than those of the acute alcoholic psychoses, were fairly satisfactory, particularly when compared with the control cases. In the latter group of 7 consecutive patients only 1



Amphetamine Sulfate Cases		Control Cases	
1. M E. K	1	C. W.	4
2. A. M.	1	P. E.	4
3. S. M.	1	G. L.	4
4. G. A. D.	2	W. T.	5
5. W. S.	2	W. L.	5
6. H. W.	2	J. R.	5
7. J. D.	2	S. K.	6
8. A. S.	3	W. D.	6
9. J. W. J.	3	C. T.	7
10. P. M.	3	A. J.	7
11. J. D.	4	J. G.	7
12. H. C.	5	R. F.	8
13. W. F.	7	A. R.	15
14. H. E.	8	J. C.	15
15. A. M.	*****Committed*****	E. M.	*****Committed*****
Average	3.1	Average	7

FIG 1 Effect of amphetamine (benzedrine) sulfate on alcoholic psychoses days necessary for recovery delirium tremens

tion employed in a given case, (b) the response as compared with control cases, (c) the rapidity of dissipation of the psychotic state, (d) the length of time to transfer to a convalescent ward, (e) the length of hospital residence, and (f) the final disposition of the patient (committed or discharged)

## Results

**1 Acute Alcoholic Psychoses**—In this group we include cases diagnosed as pathologic intoxication, delirium tremens, and acute hallucinosis. The most striking difference between the 35 amphetamine treated cases and the 35 control cases was observed in the rapidity with which the psychotic symptoms disappeared in those patients receiving the drug. These results are indicated in Table 1. However, the percentage of recoveries was moderately increased by the use of amphetamine sulfate, for 94 per cent of the treated cases recovered, as contrasted with 86 per cent of the control cases. Only 2 amphetamine patients were committed, while 5 control cases required additional institutionalization.

Of the acute alcoholic psychoses the

TABLE 1—RECOVERY AND RAPIDITY OF IMPROVEMENT IN CONSECUTIVE TREATED AND CONTROL CASES

Diagnosis	Total Number of Cases	Number of Cases Recovered	Average Days Necessary for Recovery	Number of Cases Committed
Pathologic intoxication				
Control cases	12	11	8.6	1
Amphetamine cases	12	12	4.3	0
Delirium tremens				
Control cases	15	14	7.0	1
Amphetamine cases	15	14	3.1	1
Acute hallucinosis				
Control cases	8	5	12.0	3
Amphetamine cases	8	7	9.0	1
Korsakow's psychosis				
Control cases	7	2		5
Amphetamine cases	7	5	10.6	2

cases of pathologic intoxication responded best. When compared with control cases the average length of time for recovery was diminished by half (Table 2). Those patients receiving amphetamine sulfate were transferred more quickly to a convalescent ward, and in spite of the fact that we were interested particularly in these cases, they tended to stay in the hospital for a shorter period of time. It was not uncommon for all evidences of psychosis to disappear in twenty-four to forty-eight hours, indeed, physicians who had not seen the patient at the time of admission, frequently were reluctant

fied as without psychosis chronic alcoholism involving addiction. We are not discussing the more-than-occasional social drinkers, but chronic imbibers who have developed sufficiently abnormal reaction patterns while drinking to necessitate admission to a mental hospital to determine whether or not they are psychotic. In the hospital these patients, although not considered psychotic, exhibited frequently depressive after-effects of continuous daily imbibing. On these symptoms amphetamine sulfate exerted the usual ameliorative effect.

An effort was made to uncover and adjust the fundamental problems underlying the addiction in all of the alcoholics during their stay in the hospital, utilizing the enforced abstinence of institutionalization, the stimulating action of amphetamine sulfate, and psychotherapy. As far as possible all patients were urged strongly to attend the outpatient clinic following discharge in order to continue medication and the psychotherapeutic endeavors of the physician. However, a discouragingly small number of patients reported for more than one visit, although almost all had expressed their earnest desire to receive assistance in overcoming the habit. The unreliability of the chronic alcoholic in this respect is notorious. The obstacles to clinic treatment introduced by the overprotective attitudes, the falsified reports, and the personal drinking habits of marital partners or other relatives, are too well known to need further comment. Those patients who did report were for the most part sporadic in their attendance, and soon were bored by the therapeutic program. The personality factors contributing to this behavior have been pointed out elsewhere by one of us (Davidoff<sup>10</sup>).

Of 30 patients who attended the clinic with some regularity, temporary improvement in regard to addiction has been observed in only 3 of the recent cases. All patients who have been followed more than three months have had at least one relapse. Most of them sooner or later discontinued the medication of their own accord or abused its use. Psychotherapy,

employed during the period when the patients were attending the clinic, were taking amphetamine sulfate, and were presumably abstinent, appeared to be no more effective than during the spontaneous intervals of sobriety which occurred in the control cases or during the enforced abstinence of institutionalization when no medication was administered. We have not been able to observe any deterrent effect on the alcoholic habits of these chronic drinkers from the continuous or sporadic use of amphetamine sulfate. Indeed, the opposite seems to occur at times. Some patients, placing false reliance on the knowledge that the distressing after-effects are dissipated quickly by the drug, imbibe more freely and then resort to the ill-advised and dangerous procedure of self-medication. This undesirable practice has extended to social drinkers.

The continued unsatisfactory response of chronic alcoholic addicts to amphetamine sulfate, which has been evident consistently since the inception of the investigations, serves to emphasize our statement in a previous communication<sup>8</sup> "that successful treatment of chronic alcoholism itself requires hospitalization in an institution set aside for this purpose. Only by thus restricting the use of amphetamine sulfate can physicians be assured of adequate supervision, which will minimize the dangers of unfavorable events and prevent the abuse of this useful drug."

In January, 1939, Bloomberg<sup>12</sup> reported 21 cases of chronic alcoholism treated with amphetamine sulfate in office and clinic practice. Eight of his cases discontinued drinking for periods varying from two weeks to thirteen months. Four cases were considered total failures, although the others exhibited only moderate improvement. He concluded that the drug is of great value in the treatment of chronic alcoholism, in that it may permit a sufficient interval of sobriety for the employment of psychotherapeutic procedures. As is evident from the previous discussion, we cannot share this opinion because our results in

showed any degree of improvement, 5 required commitment, and 1 died. In the amphetamine series only 2 required further institutionalization. The tendency toward deterioration, the complicating physical conditions and vitamin deficiencies, and the preadmission medication presented obstacles for satisfactory treatment similar to those encountered in the delirium tremens group. The statistical data in Table 3 revealed that the percentage of cases diagnosed as Korsakow's psychosis decreased from 10.8 per cent in the control period to 2.3 per cent in the amphetamine period at the same time that the cases classified as delirium tremens increased from 14.9 to 19.3 per cent. This seems to indicate an aborting effect of amphetamine sulfate on the symptoms of Korsakow's psychosis (subacute type) with a resultant classification as delirium tremens.

In the other more severe, deteriorating types of alcoholic psychoses where personality alterations and organic sensorial defects were present and progressive, amphetamine sulfate appeared to be without value. In the series of control and amphetamine patients, almost all were sooner or later committed regardless of whether amphetamine sulfate had been administered.

**3 Without Psychosis Acute Intoxication**—We have been impressed repeatedly with the effectiveness of amphetamine sulfate in the acute phases of alcoholic intoxication. Frequently, boisterous, excited, hyperactive, surly, and irritable individuals are quieted by the drug, a few fall asleep after the medication. Beginning tremor in these patients is aborted. Occasionally, however, the drug appears to increase the excitement or the tremulousness. The incoherence and incoordination characteristic of the more profound stages of inebriation is replaced rapidly by a more sober coordinate state. Persons who have imbibed sufficiently to become stuporous have been aroused within thirty minutes following the intravenous injection of 20 to 30 mg of amphetamine sulfate. The drug has rendered depressed, sullen, and asocial

intoxicated individuals more cheerful and adaptable. Certain of our chronic alcoholics have developed the habit of taking amphetamine sulfate in preparation for periodic excessive indulgence. They claim that they are able to consume larger quantities of alcohol without the appearance of unpleasant symptoms. For the same reason, other patients carry the drug in tablet form with them and take it during or subsequent to an alcoholic spree. Some persons obtain the same results by excessive use of the amphetamine inhaler. Patients receiving amphetamine sulfate daily for chronic alcoholism at times severely overdose themselves while too intoxicated to be responsible and to remember how many tablets they have taken. Others occasionally overdose themselves in attempting to ingest an amount of amphetamine sulfate commensurate with the quantities of alcohol consumed.

Following any period of excessive indulgence there appears, within some hours, the characteristic physiologic and psychologic after-effects and withdrawal symptoms. In persons who have received amphetamine sulfate during the acute stages of intoxication these symptoms are aborted or mild. In other individuals who are not thus medicated previously, these disturbing symptoms can be dissipated quickly within a few hours by oral doses of 10 to 20 mg of the drug. Wilbur, MacLean, and Allen<sup>11</sup> have made similar observations. These after-effects of an acute alcoholic episode in chronic alcoholic individuals can be similarly alleviated without altering the habitual tendency toward inebriation.

**4 Without Psychosis Chronic Alcoholism Involving Addiction**—A review of the alcoholic individuals admitted to the hospital over a period of several years and diagnosed as without psychosis alcoholism revealed that a number of these persons were readmitted subsequently with deteriorating psychoses. In these cases amphetamine sulfate had no beneficial or deterrent effect. These cases further indicate the type of patients we are including in the group classi-

men If it is not neglected, it is often treated about the same way in which the friends of the patient would treat him, which is to get him off the particular bout rather than with definite rehabilitation in view

Alcoholism in any form is a medical problem with many psychologic aspects Any of us who have had experience know that we cannot expect any medicine to change a fundamental personality defect We see that in this series of cases amphetamine has shortened the length of time that the alcoholic has been sick Its application in private practice does present many difficult problems Even the person who comes to one's office begging for help to cure his alcohol addiction finds some excuse after a week or so not to keep his appointment, and you next hear that he is being treated for his alcoholism by someone else.

The little success that I have had in treating alcoholics, and it is very little, seems to me to hinge largely upon development of the patient's personality, so that social satisfactions are available to him, and upon the development of the ambition to be a teetotaler Whenever the ambition to be a moderate drinker persists, the alcoholism continues

Dr Robert J Stein, *Canandaigua New York*—There are several reasons why Dr Reifenstein and Dr Davidoff are to be commended on the excellent paper we have heard today First, they have shown us fairly conclusively the definite value of benzedrine sulfate in acute phases of alcoholism with and without psychosis Secondly their paper includes, more or less, the results of a scholarly investigation which was first initiated in 1936 In spite of many early encouraging results, the authors did not let enthusiasm interfere with their making a careful study of the value of this drug Proceeding cautiously, they made a comprehensive survey of the pharmacologic physiology of benzedrine sulfate, and subsequent clinical investigations have all been adequately controlled Thirdly, their unsatisfactory results obtained in treating chronic alcoholism emphasize the seriousness that confronts the medical profession in dealing with this problem

On the other hand success in treating acute alcoholism, and the study of benzedrine sulfate's physiologic properties, may well serve to stimulate additional research by considering the following facts Our present accepted treatment of the chronic alcoholic is based on a resolving of psychogenic factors that may account for the need of alcohol followed by a re-education and rehabilitation of the individual I believe this

treatment is undoubtedly directed toward the reason why an individual may find an "escape" with alcohol, but that we have lost sight of what has happened to him biologically so that he becomes an alcoholic By this I mean, supposing the above accepted treatment is carried out successfully, the chronic alcoholic can never again use alcohol in moderation, and a cure is based wholly on the ability of an individual to live his life without alcohol being included in his diet In short, because attempts to discover definite biochemical or physiologic changes in chronic alcoholism have been unsatisfactory, the individual is not being treated as a psychobiologic entity

With the information we already have concerning the physiologic changes in alcoholism, how can we then correlate some of the findings presented to us today by Dr Reifenstein? Studies have shown that the toxicity of alcohol is influenced inversely by the concentration of the sugar in the blood Clinically we have noticed improvement in "hang-over" symptoms after a patient has ingested sugar We have discovered that in delirium tremens there is a lowered oxygen uptake, reduction in blood chlorides, dehydration in spite of cerebral edema, and liver dysfunction resulting in a disturbed carbohydrate metabolism and a decreased activity of the liver as a detoxifying agent We know the resulting cerebral anoxemia, and cerebral edema, the latter producing an increased intracranial pressure, causes excitation of the sympathetic-adrenal centers which will tend to compensate for the anoxia Therefore, cannot the beneficial results obtained in the use of benzedrine sulfate be explained on the basis of its pseudo-sympathomimetic activity as well as its central stimulating property? In chronic alcoholism could we not be dealing with a more latent type of carbohydrate and water metabolism dysfunction, not readily discovered, but producing some irreversible changes? Could not emotional tension due to psychologic factors, in addition to the constant stimulation of the sympathetic-adrenal centers from this cerebral anoxemia, cause a gradual depletion or change of the chemical products that are obtained by the excitation of the sympathetic system? Could not benzedrine sulfate, or some other drug effecting a disturbed metabolism take the place of these depleted chemical products? Some of us have seen benzedrine sulfate take the place of an early morning drink so that a chronic alcoholic could end his present debauch In this case the drug appears to be a surrogate for alcohol.

Could not an individual after he has be-

chronic alcoholics with addiction have been uniformly unsatisfactory

5 *Alcoholic States Complicating Other Mental Illness*—Alcohol may serve as a precipitating factor in the institutionalization of patients with other forms of mental illness. Such individuals who have been drinking may be admitted to the hospital with manifestations suggesting acute intoxication, such as confusion, depression, or excitement. In these patients amphetamine sulfate has been effective in alleviating the symptoms interpreted as acute intoxication unless such manifestations are part of the fundamental pre-existing mental illness which has been accentuated by the alcohol. The bizarre, unclear, clinical syndrome which these cases present on admission to the hospital may be clarified more rapidly by the administration of amphetamine sulfate so that the underlying condition becomes apparent, particularly in the functional states. The depressive after-effects of previous inebriation are dissipated almost as well as in the uncomplicated alcoholic groups. In the presence of organic deterioration from any cause the drug is not effective.

## Summary

A series of over 100 cases of alcoholism with and without psychosis has been treated with amphetamine sulfate and compared with a comparable series of consecutive control cases. The results are as follows:

1 In the acute alcoholic psychoses the length of time necessary for recovery was considerably diminished, frequently by half, and the number of recoveries was slightly increased. An aborting tendency of the therapy was cited in the shift of cases from the pathologic intoxication group to the without-psychosis classification.

2 In the protracted alcoholic psychoses tending toward deterioration the results were of very little significance except in the Korsakow's group where a smaller number of cases required commitment after treatment with the drug. An aborting effect was observed in a

shift of cases from the diagnosis of Korsakow's psychosis to the classification of delirium tremens.

3 In the acute phases of alcoholic intoxication amphetamine sulfate has been most effective. Likewise the characteristic physiologic and psychologic after-effects of acute inebriation have been dissipated quickly by the drug.

4 In the treatment of chronic alcoholic addiction with amphetamine sulfate our results have been uniformly unsatisfactory. However, the depression following continuous daily imbibing in these patients responds to the drug during an institutional régime.

5 In alcoholic states complicating other mental illness, amphetamine sulfate at times may be of value in differentiating the states of depression due to alcohol alone, which are usually rapidly dissipated by the drug, from the states of alcoholic depression superimposed on and masking depression of psychogenic origin, which do not respond as readily to the drug.

6 Amphetamine sulfate is of value in the more acute phases of alcoholism with and without psychosis.

708 Irving Avenue

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## Discussion

Dr. Albert B. Siewers, *Syracuse, New York*—I feel that Drs. Davidoff and Reifenstein are to be commended on this presentation, particularly on account of the thoroughness of the study, and because it adds one more link to the chain of clinical evidence in the use of amphetamine, and also because it is a study of a medical problem which is too often neglected by medical

# ACUTE PANCREATITIS

JOHN J. MORTON, JR., M.D., Rochester, New York

(From the Department of Surgery, the University of Rochester School of Medicine and Dentistry, Rochester)

**D**URING the ten years following the publication of the excellent review by Schmieden and Sebenius,<sup>1</sup> there has been an increased interest in the problem of acute pancreatitis. Many articles have appeared in the medical literature. Efforts to improve the diagnosis have been recorded. Controversies regarding the proper treatment have divided surgeons into two groups.

This study is based upon the cases of acute pancreatitis that have occurred in the Strong Memorial and the Rochester Municipal hospitals. The clinical impressions and the results of treatment have been abstracted from the records. The files of the pathologic department on pancreatitis have been consulted as well. The pathologists recognize two types of acute pancreatitis at postmortem examination which will not be included in this report. There were 24 cases of acute focal pancreatitis which were coincidental findings in fatal cases of acute infectious diseases, in some degenerative conditions, and as part of the terminal picture in some malignancies. Undoubtedly, a few patients have acute focal pancreatitis with survival. Such cases may be recorded by the laboratory tests now in use in many clinics. It is also fairly common to find acute and chronic pancreatitis of a more extensive character as part of the contributing cause of death. In some instances this acute condition is pronounced, with fat necroses and severe interstitial inflammation. The picture of acute and chronic pancreatitis was recorded in 29 instances. It was noted about equally in failing circulatory states, in malignancies with metastases to lymph nodes in the pancreas region, in carcinoma-tous extensions into the pancreas itself.

*Etiology*—No attempt will be made to discuss the basic etiologic factors responsible for the behavior of the pancreatic ferments. Nearly every writer on acute pancreatitis has covered this aspect of the etiology. Contributing factors that may lead to the condition may be grouped under several headings.

- 1 Trauma
  - (a) accidental (Table 1)
  - (b) surgical (Table 2)  
(anesthesia)
- 2 Infections in Region with Extension to Pancreas
  - (a) duodenal ulcer, penetrating head pancreas
  - (b) other types (gallbladder, biliary ducts, kidney, ileocecal)
- 3 Toxic
  - (a) alcoholism
  - (b) drugs (arsphenamine)
- 4 Obstructions to Biliary Passages (Partial or Complete)
  - (a) stone (Opie)
  - (b) spasm sphincter Oddi (Archibald)
  - (c) infection
  - (d) tumor
  - (e) duodenal diverticula
  - (f) ascariis
- 5 Circulatory Stasis
  - (a) general (heart failure, hypertensive apoplexy)
  - (b) local (thrombosis or embolism of pancreatic vessels)

In this review, examples of nearly every one of these contributing causes have been noted. Accidental trauma may be complicated by this catastrophe. The surgery in the region of the head of the pancreas should involve as little

come an alcoholic continue to need a substitute for alcohol because of irreversible biologic changes that have taken place? These questions are of course speculative, and none of us know the answers at the present time. Nevertheless, we

can see how the results already obtained by Dr Reifenstein and Dr Davidoff may well serve as a stimulation for future research endeavors especially in the direction of a more successful treatment of chronic alcoholism

## ALUMNI DAY PROGRAM—NEW YORK UNIVERSITY COLLEGE OF MEDICINE

10 00 A.M.

477 First Avenue, Twenty-eighth Street Building

### GREETING

JAMES W SMITH, '17, President, Alumni Association

### MODERN ASPECTS OF PREVENTIVE MEDICINE

ELAINE P RALLI, '25, Presiding Officer  
Chairman of Committee on Science and Education

#### 1 INTRODUCTORY REMARKS

HARRY S MUSTARD

HERMAN M BIGGS, Professor of Preventive Medicine

#### 2 DISTRICT HEALTH PROBLEMS AND THEIR RELATIONSHIP TO THE PRACTICING PHYSICIAN

FRANK A CALDERONE, '24, Instructor in Preventive Medicine

#### 3 NEWER ASPECTS IN THE THERAPY OF SYPHILIS

EVAN W THOMAS, '33, Assistant Professor of Dermatology and Syphilology

#### 4 PREGNANCY AND SYPHILIS

MORTIMER D SPEISER, '21, Instructor in Obstetrics and Gynecology

#### 5 PREVENTION AND TREATMENT OF GONORRHEA AND ITS COMPLICATIONS

ROBERT S HOTCHKISS, Instructor in Urology

### DEMONSTRATIONS AND EXHIBITS

Morning and Afternoon

Library Exhibit of Recent Publications by the Faculty

X-Ray Demonstration of Industrial Diseases  
I Seth Hirsch, Professor of Radiology

Motion Pictures—Industrial and Preventive Medicine

Inspection of Health Center Building  
(12 00-3 00 P.M.)

### LUNCHEON

1 00 P.M.

Wyckoff Memorial Lounge

338 East 28th Street at First Avenue

### ADDRESSES OF WELCOME

DEAN EMERITUS SAMUEL A BROWN, '04

DEAN CURRIER McEWEN, '28

CHANCELLOR HARRY WOODBURN CHASE

JOHN L RICE, Commissioner of Health, City of New York

3 00 P.M.

#### 1 PREVENTIVE ASPECTS OF INDUSTRIAL MEDICINE

LEONARD GOLDWATER, '28, Instructor in Preventive Medicine

#### 2 NEWER METHODS OF PREVENTION IN INFECTIOUS DISEASES

THOMAS FRANCIS, Professor of Bacteriology

#### 3 PREVENTION OF NUTRITIONAL DEFICIENCIES IN ACUTE AND CHRONIC DISEASE

ELAINE P RALLI, '25, Associate Professor of Medicine

#### 4 PREVENTION OF COMPLICATIONS OF CHRONIC ALCOHOLISM

NORMAN JOLLIFFE, '26, Associate Professor of Medicine

5 00 P.M.

SOCIAL HOUR WITH DEAN McEWEN  
Dean's Office, Twenty-eighth Street Building

### BLOW TO TOMBSTONE TRADE

Based on data supplied by the various State Health Departments to the National Tuberculosis Association, 63,332 persons died of tuberculosis in 1938 in the United States, as compared with 69,292 in 1937, a decline of nearly 6,000 deaths

### THOSE LONG EVENINGS

"The doctor is going to teach me to play cards so that I'll know about it after we're married."

"That's nice. What game is he going to teach you?"

"I think it is called solitaire"—*Medical Record*

# ACUTE PANCREATITIS

JOHN J. MORTON, JR., M.D., Rochester, New York

(From the Department of Surgery, the University of Rochester School of Medicine and Dentistry, Rochester)

**D**URING the ten years following the publication of the excellent review by Schmieden and Sebening,<sup>1</sup> there has been an increased interest in the problem of acute pancreatitis. Many articles have appeared in the medical literature. Efforts to improve the diagnosis have been recorded. Controversies regarding the proper treatment have divided surgeons into two groups.

This study is based upon the cases of acute pancreatitis that have occurred in the Strong Memorial and the Rochester Municipal hospitals. The clinical impressions and the results of treatment have been abstracted from the records. The files of the pathologic department on pancreatitis have been consulted as well. The pathologists recognize two types of acute pancreatitis at postmortem examination which will not be included in this report. There were 24 cases of acute focal pancreatitis which were coincidental findings in fatal cases of acute infectious diseases, in some degenerative conditions, and as part of the terminal picture in some malignancies. Undoubtedly, a few patients have acute focal pancreatitis with survival. Such cases may be recorded by the laboratory tests now in use in many clinics. It is also fairly common to find acute and chronic pancreatitis of a more extensive character as part of the contributing cause of death. In some instances this acute condition is pronounced, with fat necroses and severe interstitial inflammation. The picture of acute and chronic pancreatitis was recorded in 29 instances. It was noted about equally in failing circulatory states, in malignancies with metastases to lymph nodes in the pancreas region, in carcinomatous extensions into the pancreas itself.

*Etiology*—No attempt will be made to discuss the basic etiologic factors responsible for the behavior of the pancreatic ferments. Nearly every writer on acute pancreatitis has covered this aspect of the etiology. Contributing factors that may lead to the condition may be grouped under several headings.

## 1 Trauma

- (a) accidental (Table 1)
- (b) surgical (Table 2)  
(anesthesia)

## 2 Infections in Region with Extension to Pancreas

- (a) duodenal ulcer, penetrating head pancreas
- (b) other types (gallbladder, biliary ducts, kidney, ileocecal)

## 3 Toxic

- (a) alcoholism
- (b) drugs (arsphenamine)

## 4 Obstructions to Biliary Passages (Partial or Complete)

- (a) stone (Opie)
- (b) spasm sphincter Oddi (Archibald)
- (c) infection
- (d) tumor
- (e) duodenal diverticula
- (f) ascari

## 5 Circulatory Stasis

- (a) general (heart failure, hypertensive apoplexy)
- (b) local (thrombosis or embolism of pancreatic vessels)

In this review, examples of nearly every one of these contributing causes have been noted. Accidental trauma may be complicated by this catastrophe. The surgery in the region of the head of the pancreas should involve as little



TABLE 1—POSTTRAUMATIC PANCREATITIS

Case	Diagnosis	Course	Findings
F E	Compound fract. tibia & fibula	Fat embolism	Acute pancreatitis. Fat necrosis
A. T	Fract. humerus	Bad shape for 10 days Decided to operate but sudden death before op—pulm embolism	Pulmonary embolism. Cardiac hypertrophy Ac. mitral endocarditis Ac. hemorrhagic pancreatitis
M G	Fract. ribs several R. hemothorax Fr bones leg Fr clavicle Fr 6th D vert	Cyanosis and intractable distention Death 21 hrs after accident	200 cc. blood tinged fluid. Brown discoloration head pancreas. Gland intact. Widespread fat necrosis

trauma as possible in order to forestall such a complication. Surgeons should keep this in mind when faced with such conditions. The occurrence of acute pancreatic necrosis during or directly following anesthesia has been recorded by Cracovaner.<sup>2</sup> This must be a rare occurrence but it may have been a contributing factor in 2 of our cases. Toxic substances may be partially responsible for the etiology of acute hemorrhagic pancreatitis. Many writers have commented on this aspect.<sup>3,4</sup> Acute pancreatitis followed heavy use of alcohol in at least 3 of our series. Intravenous arsenicals also have been implicated in some instances.<sup>5</sup> In 1 of our patients the attack was precipitated immediately after the treatment while the patient was still in the physician's office. The common channel of the biliary and pancreatic ducts (Opie) has been recorded by almost every writer on the subject. There were several instances, clearly demonstrated at postmortem in this series. It is by no means as important a finding as it was once considered.<sup>6</sup> Occasionally, an interesting bacteriologic study shows how the pancreatic ducts fail to resist organisms under pressure. Holman<sup>7</sup> reported that the typhoid bacillus which had been present in the gallbladder for twenty years had produced a fatal pancreatitis when a stone blocked the common duct. Rich and Duff<sup>8</sup> emphasized the peculiar type of vascular necrosis caused by the tryptic ferment when the duct-acinar system had been disrupted through obstruction to the pancreatic secretion. When obstruction has taken place over a long period there may be no effect upon the pancreas even though its ducts be widely dilated. This may be due to absence of

pancreatic secretion or accommodation to the unusual circumstances. It is difficult to explain the report of White and Owen<sup>9</sup> except upon such a basis. The association of biliary tract disease and acute pancreatitis has been commented upon by many writers. It varies from 20 per cent to 80 per cent. Brody and Custer<sup>10</sup> reported on the degenerative and inflammatory types of acute hemorrhagic pancreatitis.

**Pathology**—In Fitz's original communication on acute pancreatitis, he called attention to three forms of the condition: the hemorrhagic, the gangrenous, and the suppurative. For many years it has been apparent that there is a less violent form which has been called acute pancreatic edema (Zoepffel). Recently Elman<sup>11,12</sup> has written several papers on this nonhemorrhagic form of pancreatitis. He called it acute interstitial pancreatitis. In one review, gathering 37 cases,<sup>11</sup> Archibald, Dan Jones, Stetten, Quick, and Brocq had written on this form of the condition previously. Practically every surgeon of experience has encountered the condition at some time. It was once considered to be the early stage of the acute hemorrhagic variety. The condition then was supposed to progress from edema to hemorrhage to necrosis or massive gangrene to abscess or cystic degeneration. It has been established now without doubt that many cases of acute pancreatic edema never advance beyond that stage but tend rather to regress. Consequently, for evaluation of therapy, two or three distinct groups should be made. In this series an effort has been made to separate acute pancreatitis into three groups: (1) acute edematous pancreatitis, (2) acute hemorrhagic/necrotic

TABLE 2 — POSTOPERATIVE PANCREATITIS

Case	Diagnosis	Operation	Result	Findings
A D	Pen duod ulcer head pancreas	Posterior gastroenterostomy	D 5 d po	Acute and chronic pancreatitis
H A.	? Perf ulcer	Exploration Chylous ascites	D 3 d po	Chr cholecystitis Chr cholelithiasis Ac & chr pancreatitis Extensive fat necrosis
J D	Bleeding duod ulcer	Resection du Billroth I anast.	D 0 d po	Induration pancreas Fat necrosis
F A	Bleeding duod ulcer	Resection du Polya Moynihan anastomosis	D 8 d po	Duodenal leak. Acute pancreatitis Fat nec Peritonitis local
R W	Stone in common duct	Breaking and removal stone	D 1 d po	Acute pancreatitis
C McK.	Chr cholecystitis Chr cholelithiasis	Cholecystectomy	D 4 d po	Bronchopneumonia Ruptured wd Ac. & chr pancreatitis
A M	Stone in common duct	Dr common duct Chr pancreatitis	D 8 d po	Subacute pancreatitis
O H	Chr cholecystitis Chr cholelithiasis	Cholecystectomy Colloid ca g b	D 4 d po	Subacute pancreatitis Fat necrosis
I S	Carcinoma colon	Resection colon L to side anast.	D 2 d po	Auricular fibrillation Acute pancreatitis
A K.	Toxic nodular goiter	Thyroidectomy partial	D 1 d po	Thought to be thyroid storm P M — Acute hem pancreatitis

pancreatitis, (3) pancreatic abscess. The basis for this grouping has been made from the description of the pancreas as seen by the surgeon at operation, or as given by the pathologist at the post-mortem examination. There may be flaws in this classification. Some cases of edema of the pancreas have been accompanied by bloody or prune juice exudate and fat necroses, others have lacked one or both of these accompaniments. The pancreas has been greatly enlarged, in part or as a whole in every instance. Sometimes it has been firm, nodular, and tense. At other times it has been soft and boggy. There has been a peculiar translucent greenish edema in the mesenteric, omental, or retroperitoneal tissues in proximity to the pancreas in some cases (Eliason and North).<sup>14</sup> Mild forms of pancreatic edema which would be revealed by laboratory tests have not been included in this report. Although the amylase test has been added to the examinations now being done, our experience with it has been too limited. We have seen and diagnosed clinically a considerable number of cases of acute pancreatitis. These have not been added because they lacked scientific verification. If the diagnosis of the mild forms must rest entirely upon a laboratory test, statistics for this type might best be included in still another group.<sup>15</sup> Consequently, the acute edematous cases reported here have been of the more severe

type. The other two groups which we have made would seem to be self-explanatory.

**Symptoms** — The symptoms given by the three groups of acute pancreatitis included in this report cannot be used for differentiation of the groups. The milder forms of the edematous variety may give almost similar symptoms but they tend to lessen in severity within a few days.<sup>13, 15, 16</sup> **Pain** was present in 100 per cent of all types. It has been described as "agonizing," "unbearable," "excruciating," "knifelike," "stabbing," and "colicky." It struck suddenly, severely. It was usually steady, persistent, heavy. Large doses of morphine were required for relief and even failed in some instances. The pain usually started in the epigastrium. It radiated to either costal margin, to the back, to either shoulder or axilla, or to the costovertebral angles. It was of assistance in diagnosis when the pain radiated transversely across the epigastrium to the left. **Vomiting** accompanied about 75 per cent of all types. It usually came early but did not persist. Occasionally, however, it became continuous. Usually it was not progressive—that is, it failed to become fecal. Blood was present in the vomitus on several occasions. **Constipation** was the rule. **Jaundice** was present in about 33 per cent, sometimes a slight icteric tint and sometimes severe and deep. The presence or absence of shock depended

TABLE 3

Cases	Ac Gb	Rup Ul	Rup App	Rup Bct	Int Obs	Mes Thro	Pento	Cor Occ.	Misc	Total	Ac. Panc
Ed	23	21	12	3	2	1			4	46	8 + 2 sur.
H/N	19	16	14	2	3	4	2	4	10	57	9 + 2 sur.
Abs	7	6	1			1	2	1		11	3
Total	49	43	27	5	2	6	4	5	14	114	20 4

Total of diagnoses made 138  
Acute pancreatitis diagnosed or suspected 24 (17 per cent)

upon the stage when seen by the physician. It was present in some of the cases seen early. About 50 per cent of the patients were described as extremely ill on admission. Cyanosis was present in a few. Twenty-five per cent of these patients gave a previous history of indigestion or discomfort in the epigastric region.

In body habitus, 20 per cent were very fat, and 58 per cent were better than average in stoutness. The temperature was normal, subnormal, or very slightly elevated in most of the early cases. In the same individuals the pulse tended to be disproportionately raised, averaging around 100 F to 110 F. There was, in addition, a white blood count that averaged 17,000 cells. There were 13 individuals with blood counts over 20,000, and only 3 with counts under 10,000.

The outstanding physical sign was tenderness, present in practically all except the very late cases. *Tenderness* was most frequently present in the epigastrium. It varied in position. In the acute hemorrhagic/necrotic group it was present in the epigastrium in 55 per cent, costovertebral in 32 per cent, L U Q and R U Q in 11 per cent, and general, and in the R L Q in 1 per cent each. In the acute edema group it was almost equally distributed over the epigastrium, both upper quadrants, both lower quadrants, generalized, and costovertebral. The left costovertebral angle tenderness was important in assisting toward a diagnosis. *Spasm* was present in about 50 per cent of all cases. *Distention* was prominent in 38 per cent of all cases. In long-standing cases there was a low temperature, a low white blood count, disorientation, lack of vitality, and emaciation.

In a few of the acute cases high blood sugars were recorded. In 1 individual, persistent glycosuria and a blood sugar of over 400 mg was present. It was never completely controlled even by large doses of insulin. Tests for blood or urinary diastase, blood lipase, or tryptic fermentation were not recorded in this series.

*Diagnosis*—The severe types of pancreatitis are seen so seldom by physicians that the possibility fails to get consideration. The patients in this series were seen by many physicians. If all the diagnoses suggested be taken, and compared with those actually made as acute or suspected pancreatitis it gives an idea of the difficulty. Acute pancreatitis was diagnosed or suspected in only 17 per cent when figured on this basis. The diagnoses most commonly made were acute cholecystitis or cholelithiasis 43, ruptured ulcer 27, intestinal obstruction 8, mesenteric thrombosis 6, ruptured appendix 5, coronary occlusion 5, peritonitis 4, and ruptured ectopic 2. Other diagnoses suggested were gastric crises, bacterial endocarditis, liver abscess, pelvic inflammation, hepatitis, food poisoning, advanced malignancy. All these diagnoses typify a severe type of disease (Table 3).

The diagnosis should be suggested in a given case by the sudden intense pain, the vomiting, the apparent severe blow to the patient, the localization of tenderness, the distention, the absence of fever with the presence of a relatively rapid pulse, and a high white blood count. Shock may or may not be apparent at the time the patient is seen but no one can doubt that something serious has happened. The diagnoses offered are an evidence of this. Excessive obesity with

TABLE 4—ACUTE PANCREATITIS, EDEMATOUS (Zoepfel)—ACUTE INTERSTITIAL (Elman)

Case E B	Duration 48 hrs.	Operation None	G.B. Chronic stone cd.	Pancreas Acute	Fat Nec. +	Exudate Prune juice	Result D 6 hrs	Abd. tap diagnos- tic
K. G.	72 hrs	Cholecystect. appendectomy	Chronic	Large firm subac.	+	Blood stained	D 4 d p o	
E D	48 hrs	Dr gb & pan	Normal	Large hard	+	Prune juice	D 5 d p o	Hemoly strep
T C.	72 hrs	Dr gb	Normal	Swollen hard	0	Blood tinged	D 5 d p o	
A. S.	12 hrs	Dr gb	Normal	Large hard	0	Prune juice	D 3 d p o	Staph aureus
J P	34 hrs	Dr gb & c.d	Chronic	Hard edem	+	Bloody bile	D 2 d p o	
C. H.	96 hrs	Dr gb & for W	Chronic stones	Hard nodu- lar	+	?	D 5 wks p o	Int. obstr duo- denum
J S.	2 wks	Cholecystect. Cr c. duct	Chronic stones	Large hard	+	'	D 1 d p o	Stone ampulla
H. L.	2 wks	Dr c. duct	Ac. & chr stone cd.	Hard subac	+	Prune colored	D 1 d p o	Myocard dam
E. McL.	5 ds	Dr gb	Tense	Hard	+	Bloody	D 12 d p o	
E H.	72 hrs	Dr gb & pan	Acute stones	Hard large	+	Murky yel- low	W	Cholecystect. later
M. H.	10 ds	Rem stones cholecys.-duod	Chronic stones	Swollen in- durated	—		W	
N McC.	5 ds	Dr gb rem. stones	Chronic stones	Hard	+	Pinkish	W	No fluid on diag tap
V Z.	4 hrs	Dr gb lesser pent.	Normal	Edema	—	Clear	W	
H. G.	5 hrs.	Cholecystect.	Chronic stones	Enlgd hard	—		W	
M. M.	6 ds	Exploration	Full tense	Firm enlgd	—		W	
M K.	3 ds.	Dr gb	Chronic stones	Greatly dis- tended	—		W	Cholecystect. later
E S.	3 ds	Dr gb rem stones dr pan	Tense stones	Enlarged indurated	—		W	Cholecystect. later
J S.	2 ds.	Dr pan	Normal	Tense mass head pan	+	Clear	W	
F S.	8 hrs.	Dr pan	?	Indurated	+	Light green	W	
R. A.	weeks	Dr c.d	Out	Subac.	+		W	
M. B.	1 wk.	Cholecystect. Dr c.d	Chronic stones	Enlgd firm head pan	+		W	
S G.	1 wk.	Dr c.d	Normal	Edema pan.	—		W	

Twenty two cases with operation 9 died—40.9 per cent mortality

such a picture can be considered additional support for the diagnosis. Tenderness to the left of the midline or in the left costovertebral angle should arouse suspicion. Tests for pancreatic ferments have been advocated as helpful in diagnosis. It has been generally agreed that tests for tryptic and lipolytic ferments have no constant value. Tests for amylase in the blood or urine have been made by many investigators. Their value has been established for the milder and the moderately severe types. The fulminating gangrenous types often may not be demonstrated by these tests.

**Differential Diagnosis**—This condition must be differentiated from gastric and duodenal perforations. In the latter, there is generally more spasm and splinting of the muscles within a short time from the onset. Some pin-point perforations may be exceptions. Roentgen-ray studies should be made to demonstrate the presence of gas free in the peritoneal cavity.

Intestinal obstructions usually show a progression in vomiting from gastric to biliary to fecal. There is rarely any spasm or marked tenderness early in the course. Evidence of peristaltic activity should be sought, for acute pancreatitis gives a paralytic type of distention. Roentgen-ray studies should be made to determine the extent of intestinal involvement.

Mesenteric thrombosis may be difficult to differentiate, especially if there be blood in the vomitus. The presence of cardiac involvement would favor thrombosis. Bloody vomitus is a bad prognostic sign in either condition.

Coronary occlusions rarely show the initial high white blood count. The blood pressure determinations would be of great assistance. Development of a pericardial friction rub would be helpful.

An aid to differential diagnosis which can be employed is abdominal paracentesis. Recovery of the characteristic prune juice fluid would make the diagnosis.

TABLE 5—ACUTE PANCREATITIS—HEMORRHAGIC/NECROTIC

Case	Duration	Operation	Result	Case	Duration	Operation	Result
F L	?	None	D 2 d	A K	1 hr	Dr gb pan	W
J L	?	None	D 1 d	P B	6 hrs	Explor	D 4 d p o
G Q	12 hrs	None	D 2 d	A I	6 hrs	Dr gb	D 4 d p o
D R	36 hrs	None	D 1 d	I S	12 hrs	Dr gb pan	D 1 d p o
M H	96 hrs	None	D 4 d	H F	10 hrs	Dr pan	D 2 d p o
Five cases with no operation—5 died				H K	30 hrs	Explor	D 3 d p o
				L B		Dr gb pan	W
				A S	3 days	Dr gb pan	W
				S H	3 days	Dr gb pan	D 9 d p o
				A S	3 days	Dr pan	W
				F P	4 days	Dr gb	W
				F R	3 wks	Dr cd pan	D 3 wks p o
				P C	4 wks	Dr retrop	D 3 wks p o
				Thirteen cases with operation 8 died—61.5 per cent mortality			

It helped in 1 of our cases but failed in another Peterson<sup>17</sup> reported on its value in diagnosis

**Treatment**—The greatest controversy at present is centered on the treatment of acute pancreatitis. If pancreatic abscess can be diagnosed, there is general agreement that drainage should be instituted. The pancreas can be reached for drainage either through the gastro-hepatic omentum, the gastrocolic omentum, through the foramen of Winslow when the lesser peritoneal cavity is involved, or retroperitoneally.

If the surgeon could be sure of his diagnosis, he might risk a more conservative plan in many cases of the other types. No surgeon need be too proud of his results in the severe types of pancreatitis. But by training, most surgeons would prefer to operate and be wrong in their diagnosis than not to operate and be wrong. Consequently, in case of a doubtful diagnosis it is preferable to operate. In this way, the danger of overlooking perforated ulcers, ruptured appendices, ruptured ectopic pregnancies, gangrenous gallbladders, or gangrenous bowel loops is avoided. Judging from the inability to diagnose pancreatitis from symptoms and signs only, most cases will still fall in this class.

The amylase test may make it possible to differentiate between the edematous and the fulminating severe types. In the former there is a correlation between the concentration of the ferment in the blood and the severity of the disease, in the latter, the test may fail.

Apparently most writers believe that it is safe to watch a *diagnosed* pancreatitis

case although there will be some deaths in any series treated expectantly. We have had this experience in this series. Brocq,<sup>18</sup> Colp,<sup>19</sup> deKlimko,<sup>20</sup> Unger,<sup>1</sup> Mikkelsen,<sup>22</sup> Kappis,<sup>23</sup> and others also record such instances. Kappis believes that when this occurs it indicates poor judgment in selection, the patients who died being too sick for conservative handling. Judging from reports in the literature, a decided preference for delayed operative treatment has been gaining ground in the last ten years.

Nearly everyone is in agreement that a badly shocked patient should be given the benefit of preparation for operation. He should have his fluid balance restored, be relieved of his pain, and put into the best possible shape for surgery. There will be an opportunity in most cases to take blood for the amylase test, for blood sugar determinations, and for matching for transfusion. Roentgen rays of the abdomen to demonstrate the presence or absence of free air (ulcer perforation) or isolated dilated loops of bowel (intestinal obstruction) can be secured. The vomiting and dilatation of the stomach can be controlled by a Wangenstein tube.

The pancreatic edema patients can be watched to advantage. When the acute attack has subsided, the biliary tract should be drained. This form of the disease is probably due to some obstruction of the pancreatic ducts, according to Cole.<sup>24</sup>

There has been a fatalistic attitude toward the fulminating hemorrhagic necrotic type of pancreatitis for years. It has become accepted that a certain amount of destruction of the gland is in

TABLE 6—ACUTE PANCREATITIS—ABSCESS

Case	Duration	Diagnosis	Operation	G B	Pan	Fat Nec.	Exudate	Result
12609	2 wks	Cholecystitis Cholelithiasis Ac. pancreatitis	Cholecystect. Dr c.d Dr lesser pent.	Chronic full of stones	Indurated	No	Clear fluid gen cavity thick pus lesser pent.	D 2 d p o
24768	1 1/2 ds	Mes thrombosis Peritonitis Rupt. viscus Peritonitis	Dr pent	Normal	Engld indurated	Yes	Clear fluid gen cavity thick pus lesser pent.	W
32320	10 ds		None	Acute	Subacute inflam.	Yes	Pus	D 4 d
50101	1 1/2 ds	Coronary occ. Rupt. g b	None	Normal	Acute inflam.	Yes	Multiple pan abscesses	D 18 hrs
30323	3 ds	Cholecystitis Pan abscess	Dr pan Dr g b Dr pan abs	Chronic	Engld hem nec	No	Brown fluid thick pus	W
70500	5 ds	Stone c. duct Ac. pancreatitis	Dr pan Dr pan Dr g b	Chronic stone c.d	Indurated	Yes	Thick pus	D 10 d p o cs men ing endo- card W
129430	18 hrs	Ac appendicitis Ac. cholecystit.	Dr abs pan Dr lesser pent. Dr g b	Acute	Thickened nodular	No	B coli pus	W
Results 7 cases—4 deaths (2 died without operation 2 died with operation)—57.1 per cent mortality 5 cases with operation 2 died 3 lived—40.0 per cent mortality								

compatible with life. Yet every long-experienced surgeon must remember patients who have sloughed out practically the whole pancreas after drainage has been instituted. Such an episode in one of the late Dr. Dan Jones's patients under my supervision is a vivid recollection. Polayes, *et al.*,<sup>25</sup> recorded such an instance and referred to a similar case of Colp's.<sup>19</sup> MacKechnie<sup>26</sup> has also reported on the sequestration of a large portion of the pancreas. It would appear that such a necrotic piece of tissue should have access to the surface. The basis for drainage operations of the pancreatic area was to allow for the escape of active pancreatic secretions and for the extrusion of dead pancreatic tissue. Drainage should be carried only through the peritoneum over the gland or into definite necrotic areas. Insertion of drains should be done gently in order to limit rather than extend the process. It is practically impossible to incise the pancreas itself for drainage purposes without doing more harm than good. Jones<sup>27</sup> used drainage to the pancreatic area in order to relieve the patient of pain and shock. He also considered that it might save the patient from a second operation for abscess. He had seen patients with relatively mild disease unrelieved of pain and shock for a prolonged period when the biliary tract had been drained but the pancreatic area neglected.

When the surgeon has demonstrated

acute hemorrhagic or necrotic pancreatitis, he is faced with the decision as to what procedure he should use. Some surgeons advise that he do nothing but close the abdomen unless the patient has a common duct stone.<sup>27</sup> If disease of the biliary tract is present, indications are for drainage of the gallbladder or common duct. Removal of stones may be necessary. Drainage down to the capsule of the pancreas, or through the foramen of Winslow, if the lesser peritoneal cavity is involved, may be useful. As in critical conditions anywhere in surgery, the more ill the patient, the least done to relieve him, the better for all concerned.

Postoperative treatment should consist in complete deprivation of food and water by mouth for three to four days. Wangenstein suction may be employed to advantage. Parenteral fluids should be supplied. Transfusions should be used as necessary. Glucose intravenously may call for insulin to cover it in case the pancreatic damage is severe. Adequate sedation should be employed.

**Complications.**—The surgeon must be prepared to expect a certain number of recurrences of acute attacks. This was noted in 3 of our series. Persistence of a fistula with drainage over a long period will be seen. Pancreatic abscess or pancreatic cyst may form in certain cases. Damage to the pancreatic islands may lead to an actual diabetes but this is relatively rare. There is often surprisingly

TABLE 7

## EARLY OPERATION—ALL CASES

Case	D	Mortality (percentage)
Stocker (Graz) (33)	36	21
Tammann (Göttingen) (34)	38	20
Kerschner (Prague) (31)	41	29
Linder (Brooklyn) (35)	88	23
Kappis (Hanover) (23)	44	26
Unger (Berlin) (21)	72	42
Stetten (New York) (36)	14	10
Colp (New York) (19)	46	23
deTakats & MacKenzie (Chicago) (29)	22	8
McWhorter (Chicago) (37)	51	25
Haynes (Clarksburg W Va.) (38)	6	1
Truesdale (Fall River, Mass.) (39)	54	11
Demel (Wien) (40)	23	18
Walzel (Graz) (41)	30	20
Koster & Kasman (Brooklyn) (32)	22	5
Horne (Baltimore) (42)	13	6
Parry (Hamilton) (43)	20	8
Douglas (New York) (44)	38	16
Henderson (Boston) (45)	60	32
deKlimko (Budapest) (20)	19	9
Abell (Louisville) (30)	30	0
Beck (New York) (46)	10	8
Walker (Boston) (47)	70	40
Fallis and Plann (Detroit) (48)	28	12
Morton (Rochester N Y)	40	19
911	447	49 06

## DELAYED OPERATION—ALL CASES

Case	D	Mortality (percentage)
Walzel (Graz) (41)	46	13
Peterson (Viborg, Finland) (17)	14	1
Mikkelsen (Copenhagen) (22)	39	3
Demel (Wien) (40)	34	9
Wilegans (Berlin) (49)	28	3
161	29	18 0

little evidence of disturbed pancreatic digestion. In some instances, however, the patient suffers with pancreatic asthenia. He refuses all nourishment and gradually fades in weight and strength. One of our patients lived for forty-four days after operation and then succumbed to this condition. Fatty degeneration of the liver also may be a sequel. The new ferment lipocaine described by Dragstedt may be found useful for this condition.

## Results

The different types of acute pancreatitis should be reported separately. The statistics would then have better value. As it is now, the results are given upon acute pancreatitis as a whole. The acute edematous variety is a much less serious disease especially in its milder forms. A composite group of 52 cases from the current literature gave only 3 deaths—a mortality of but 5.7 per cent, whereas a similar but larger group of severe forms gave a mortality of 60.8 per cent.

Results. Acute edematous pancreatitis

	Cases	D	
Elman <sup>12</sup>	18	0	
deTakats & MacKenzie <sup>29</sup>	12	1	
Abell <sup>30</sup>	9	0	
Kerschner <sup>31</sup>	7	1	
Koster & Kasman <sup>32</sup>	6	1	
	52	3	5.7 per cent
Acute hem/nec pancreatitis			
Koster & Kasman <sup>32</sup>	16	4	
deTakats & MacKenzie <sup>29</sup>	10	7	
Kerschner <sup>31</sup>	34	28	
Abell <sup>30</sup>	19	9	
Morton	13	8	
	92	56	60.8 per cent

Thus it would seem possible to dilute the actual mortality figures for the severe forms of the disease if enough milder types were included in the series.

That acute pancreatitis of whatever type is a serious disease is illustrated best by the next table of some of the cases reported in the last ten years. These patients were operated upon as surgical emergencies. The figures show a mortality of 49.06 per cent. If these figures are compared with a much smaller group for deferred operation there can be no doubt why the surgeon would choose to be conservative.

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## INFECTED PARENTS, TEACHERS, AND SERVANTS COMMON SOURCES OF TUBERCULOSIS IN CHILDREN

Childhood tuberculosis is invariably contracted from infected adults in the home and the school, Fairfax Hall, M D, New Rochelle, N Y, warns in the *Journal of the American Medical Association*

The sources of the infection are contact with tuberculous nurses, governesses, maids and other domestic help, teachers, and of course parents, and other adult members of the family

Dr Hall stresses the fact that 'there is a definite hazard to the health of children from intimate association with persons about whom little or nothing is known with regard to freedom from communicable diseases. Since parents are much more apt to have had adequate medical supervision than the servants in a home, the risk to children from the latter is greater. Occasionally an older member of a family, mistakenly thought to have chronic bronchitis or asthma, is

a factor to be considered in safeguarding a child from tuberculosis. School teachers with active tuberculosis are a menace to their pupils

"Contact between children and tuberculous nursemaids or other domestic helpers will be less frequent when parents are so convinced of the necessity of employing only healthy servants that they will demand proof of their servants' health

"Domestics having to do with the care of young children must be persuaded that it is to their advantage to have periodic medical examinations so that they will secure them as a matter of course. When 'health references' are universally asked for and a health card is essential to get a job, a great step forward will have been made. Physicians interested in child health should influence their patients to take this wise precaution for the sake of the children."

## NONE FOR US, THANKS

Mustard gas is the most humane and also the most effective weapon a modern army can use, Dr Charles C. Denmie, of Kansas City, a World War major, told the American Academy of Derma-

tology and Syphilology at a meeting in Philadelphia. It is the most humane gas, he said, because it disables, but does not kill—and seldom permanently injures the victim



# BOWEN'S PRECANCEROUS DERMATOSIS OF THE MUCOUS MEMBRANE

## Review of the Literature and Report of Two Cases

ANTHONY C CIPOLLARO, M D , New York City, and PAUL D FOSTER, M D , Los Angeles

(From the Skin and Cancer Unit, New York Post-Graduate Medical School, Columbia University)

THIS paper is a report of an investigation of progressive development of Bowen's dyskeratosis of the mucous membranes of the buccal and genital regions. We report for the first time a Bowenoid dyskeratosis appearing upon the tongue. The writers believe that Bowen's disease of the mucous membrane is a more common process than is generally recognized, and call attention to this established entity, reports of which have been confined mainly to the European literature.

Twenty-seven years ago Bowen<sup>1</sup> presented 2 cases of chronic atypical epithelial proliferation which constituted the forerunner to the establishment of the entity now known as Bowen's precancerous dermatosis. In the interim, over 100 similar cases have appeared in the literature. We shall refer here only to those authors who have reported mucous membrane lesions or made some unusual contribution to this subject.

The credit for first recognizing Bowen's disease of the mucous membrane\* must go to Jessner,<sup>2</sup> who in 1921 reported a case involving the proximal and under surface of the prepuce. He described the lesion near the sulcus as a scaly and erythematous hard nodular area which was covered with moderately heavy scales. The microscopic picture was typically that of Bowen's disease.

Hudelo, Oury, and Cailliau<sup>3</sup> reported the second case in 1922. The title made no mention of Bowen and it therefore escaped being recorded as such for several years. The lesions involved the mucous

membrane of the labium majus. No clinical description was given. The histologic report left no doubt as to its being a case of Bowen's disease. The condition was treated by curettage. Subsequent to this treatment there was a rapid spread of the disease to the vulva.

Richon,<sup>4</sup> in 1925, reported 3 cases of Bowen's disease involving the mucous membranes of the genitalia in females between the ages of 55 and 60 with an average duration of five to ten years. In his thesis, Richon included the case previously reported by Hudelo, Oury, and Cailliau.<sup>3</sup> Therefore, only 2 cases should be credited to Richon. He advanced the theory that Bowen's disease has three stages pathologically: (1) a state of pure dyskeratosis, (2) beginning of neoplastic evolution, (3) neoplastic evolution almost complete. He also called attention to the difficulty of early diagnosis and its similarity to erythroplasia of Queyrat. Their differentiation was made possible only by microscopic examination. He has been erroneously accredited with being the first to report Bowen's disease of the mucous membrane.

Kleeberg<sup>5</sup> in the same year, reported the case of a man, aged 75 years, who had lesions of the prepuce of ten years' duration. The lesion was 2 centimeters in diameter, dark red in color and interspersed with nodules, and margined by an infiltrated border. The treatment was not given. Gutmann's case<sup>6</sup> was that of a woman, aged 72 years, whose lesions involved the vulva. Delbanco<sup>7</sup> reported 1 case of Bowen's disease which involved the vulva and the thigh. The

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material presented was insufficient to determine whether the case he reported was one of Bowen's disease of the skin or of the mucosa. However, Rousset<sup>8</sup> who reviewed 18 cases of Bowen's disease of the mucous membranes considered Delbanco's case doubtful. The case reported is that of a woman 59 years old, with lesions on the vulva and the thigh. The microscopic examination was "positive." In his report, Delbanco considers Bowen's disease a precancerous stage of squamous cell epithelioma.

In 1926 Dartigues and Mircouches<sup>9</sup> presented a patient with lesions upon the labium minus and fourchette, the plaque measured 2.5 centimeters, was slightly elevated and erythematous. Excision resulted in a complete cure. The case reported by Bruusgaard<sup>10</sup> involved the glans penis. The lesion was of long duration and had a papillomatous or warty appearance. The patient was a man, 42 years old. Bloch<sup>11</sup> reported a case of Bowen's disease with vulvar lesions, resembling leukoplakia and kraurosis. They varied in size from a pea to a dime, they were erythematous but the centers were whitish. Roentgen radiation resulted in marked improvement. This case is probably the same one described by Sulzberger<sup>12</sup> in his Zürich thesis.

Scomazzoni<sup>13</sup> presented 3 cases with lesions of the penis. The histologic picture was typical of Bowen's disease. The first one was of one year's duration and showed an erythematous nodular plaque with a definite border. The second case was of four years' duration and gave the appearance of a venereal ulcer. The third case had had lesions for thirty years. It presented multiple papillomas in a small circumscribed area. He gave each of his patients iodides in large quantities and injections of sublimate. The results were disappointing. Asahi<sup>14</sup> reported the case of a man, 31 years old, who had had a lesion for six years on the sulcus of the penis which histologically was shown to be Bowen's disease. The lesion was removed surgically but it recurred on the foreskin. Rusch<sup>15</sup> pre-

sented the case of a woman, 36 years old, before the Vienna Dermatological Society in 1926. She had lesions that involved the labium minus, the perineum, and anal regions. They were red, raised, and papillomatous. The histologic diagnosis was Bowen's disease. The patient also had syphilis. No mention was made of the treatment administered.

In 1928 Szathmáry<sup>16</sup> reported a case of Rusch's<sup>15</sup> of Bowenoid disease involving the labium minus. There were papillomatous and leukoplakia-like lesions. The patient was a young woman, 36 years of age, who had had lesions for eleven years. Three operations were unsuccessful.

A case of Bowen's disease was reported by Guhrauer<sup>17</sup> in 1929. The patient was a woman of 45 years, who had had lesions for about one year on the labium minus. The lesions were infiltrated, elevated, rough, and hyperkeratotic. The treatment was not given. Two cases of Bowen's disease of the mucosa were reported by Arzt.<sup>18a, 18b</sup> One of these was reported in 1929. The patient was a woman, 40 years old, who had two hard, infiltrated lesions on the internal surface of the left labium majus. Hard nodes were palpable in the left inguinal region. The histologic diagnosis was Bowen's disease. The second case was reported in 1936. This patient was a woman, 57 years old, who had exudative lesions of the anus for ten years prior to examination. She had had for four years a verrucous and horny mass in the left labium minus. The left labium minus showed some thickening and flat papilla-like excrescences of grayish color. The inguinal glands on both sides were enlarged. The histologic diagnosis revealed Bowen's disease.

Nicolas, Massia, and Rousset<sup>19</sup> reviewed 3 cases in detail, 2 of the vulva and 1 of the penis. The lesions were pruriginous, circinate, slightly elevated, erythematous, nonulcerous, and had a small, slightly infiltrated pearly border. Roentgen rays were used in all 3 cases with complete cure in 2. One patient failed to return for observation. On January 23, 1930, Geiger<sup>20</sup> presented a

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epidermal carcinoma of the prickle-cell type with an intact basal layer

On March 20, 1935, Nomland, Skolnik, and Scull<sup>29</sup> presented before the Chicago Dermatological Society, a man, 53 years old, who had a plaque-like lesion involving the entire circumference of the prepuce. There were also 3 verrucous lesions in the plaque. The histologic diagnosis was Bowen's disease. The patient also had a 4 plus blood Wassermann reaction. Antisyphilitic therapy had no effect on the lesion. Dr. Hamilton Montgomery examined the histologic slide and made a diagnosis of squamous cell carcinoma, Grade 2, *in situ*.

The 3 cases presented by Howarth<sup>30</sup> affected the mouths of men between the ages of 56 and 58 years. The disease had been present in each case, over two years. The structures affected were the lip, cheeks, floor of the mouth, soft palate, fauces, and tonsillar pillars. The 3 cases were similar clinically in that they all presented papillomatous lesions which in 2 cases interfered with swallowing. In 1 case there was enlargement of the cervical glands. The histologic examination in all cases showed Bowen's disease. The 3 patients were treated with diathermic cauterization. In 1 case the lesions recurred and in the other 2 the immediate results were good.

The case reported by Ramel<sup>31</sup> is that of a woman, 47 years old, who had 3 coin-sized lesions which were elevated, reddish in color, and hyperkeratotic. One lesion was on the clitoris and the other two on the free margin of the labium majus. There was also a lesion in the perianal region. All lesions completely cleared up under roentgen-ray therapy. She received 1,300 r. The kilovoltage was 160, the milliamperage 3, and a filter of 5 mm. aluminum.

Gougerot, Moulounguet, and Lortat-Jacob<sup>32</sup> presented a man, 61 years old, with a nummular lesion involving the left side of the palate and extending onto the pillar of the left tonsil. There were some lichenoid lesions in this patch which were discrete as well as in linear formation. The histologic diagnosis was Bowen's

disease. There were no subjective symptoms and no enlargement of the cervical glands.

Touraine and Golé<sup>33</sup> report the case of a woman, 61 years old, who had lesions on the inner surface of the right cheek which resembled leukoplakia. The histologic examination, however, showed Bowen's disease. The lesions had been present for two years. The patient also had cheilitis glandularis with a squamous cell epithelioma in one area. The authors have observed on several occasions that cheilitis glandularis preceded the formation of squamous cell carcinoma. Therefore, according to this observation, cheilitis glandularis may be considered a precancerosis.

Goldberg<sup>34</sup> reported 1 case of Bowen's disease affecting the vulva. This patient also showed syphilitic papules of the vulva, leukoplakia and basal-cell epithelioma. Treatment with radium did not prevent the formation of basal-cell epithelioma.

The case reported by Daubresse-Morelle and Dupont<sup>35</sup> is that of a woman, aged 60 years, with lesions on the labia minus and majus of ten years' duration. There were large red patches with sharp margins and a hyperkeratotic surface. Subjectively, the patient had considerable pain. Treatment with filtered x-rays produced an excellent result, 2,500 r were given during a period of ten days.

The case reported by Weissenbach, Lévy-Franckel, and Martineau<sup>36</sup> was that of a woman, 25 years old, who had lesions extending from the anus to the vulva. The lesions were pinkish, elevated, infiltrated, and ulcerated. The surface was verrucous. Pruritus was especially marked during the menses. The blood Wassermann reaction was negative. It is of interest to note that this is the youngest subject in whom Bowen's disease of the mucosa is reported. Also of interest is the fact that the eruption had been present for two years.

Ferreira Marques<sup>37</sup> reported 2 cases of Bowen's disease that were previously presented jointly with E. Urbach before the Austrian Dermatological Society on

case of Bowen's disease of the left labia minus and majus before the Vienna Dermatological Society. The patient was a woman, 62 years old, who had had the lesions for nine months. The lesions were red and papillomatous and were the size of a hazel nut. There was pruritus as well as lesions of leukoplakia. There was one large, hard gland in the left inguinal region. The histology was that of Bowen's disease. The Wassermann reaction was negative. In the discussion of this case, Fuhs<sup>21</sup> reported that his case had lesions of the left labium minus and later evidences of squamous cell carcinoma developed.

Noguer Moré<sup>22</sup> simply mentions 2 cases of Bowen's disease in a report appearing in 1931. In 1 case, the sulcus of the penis is involved and in the other the mucous membrane of the upper lip. No mention is made of age, sex, duration, or treatment.

In his Paris Thesis, Favier<sup>23</sup> reported the case of a man, aged 60 years, who had a lesion on the gum which was diagnosed histologically as Bowen's disease. A few months later this patient developed submaxillary nodes which showed the same histology as the tumor in the mouth. The lesion had been present for one year. Several months after his operation the patient, who was a diabetic in poor general health, died. The author reports this as a case of Bowen's disease of the mouth with metastasis to the submaxillary glands. It is probable that this is a case of metastatic squamous cell carcinoma.

Müller's case<sup>24</sup> occurred in a woman, 35 years old, and involved the labium majus and showed senile hypertrophy and a tendency to multiple papillomas. The area affected was sharply margined. Complete cure followed excision of the lesion.

A case of Bowen's disease was reported in 1933 by Rothman<sup>25</sup>. This patient was presented before the Hungarian Dermatological Society. It was a woman, 56 years old, who had lesions of the vulva. The clinical appearance of the lesions was that of erythroplasia of Queyrat, but the

histologic diagnosis was Bowen's disease. In addition to being operated upon, she was also treated with x-rays. There was no relief from treatment. Five cases of Bowen's disease of the mucous membranes were described by Hudelo and Cailliau<sup>26</sup>. Two of these cases are new, 2 were described by Richon<sup>4</sup> in his report of 3 cases, and 1 was originally described by Hudelo, Oury, and Cailliau.<sup>3</sup> One case was in a woman who had a lesion involving the nasal mucosa. The lesion was raised, the size of a pea, smooth, and reddish in color. It bled very easily. There was no adenopathy. No mention is made of treatment. The other case was that of a man, 47 years old, who had an almond-sized proliferating lesion that was painful and was situated on the tonsil. The treatment of this case was not given.

Pozzo's<sup>27</sup> 3 cases of Bowen's disease of the mucous membranes occurred in patients with glycosuria. The first case was a man, 41 years old, who had syphilis and glycosuria. He complained of pruritus of four years' duration. There was an exudative and crusted eczematous eruption of the prepuce. Phimosis and some infiltration was also present. In places there were lesions resembling prepucial kraurosis and leukoplakia. The lesion was excised. The second case was very similar to the first one. It was in a man, 46 years old, with involvement of the prepuce. Microscopic examination revealed Bowen's disease. The third case was in a woman, 70 years old, who had a nodular elevation with partial ulceration on the left labium majus. There was no inguinal adenopathy. The microscopic findings resembled Bowen's disease, but there were also features of Paget's disease.

Satenstein and Lewis<sup>28</sup> presented before the Manhattan Dermatological Society on February 13, 1934, a man, 28 years old, who had a lesion on the glans penis. The histologic diagnosis was Bowen's disease. Some of the members present did not agree with the diagnosis. J. Frank Fraser examined the slide and stated that Bowen's disease is an intra-

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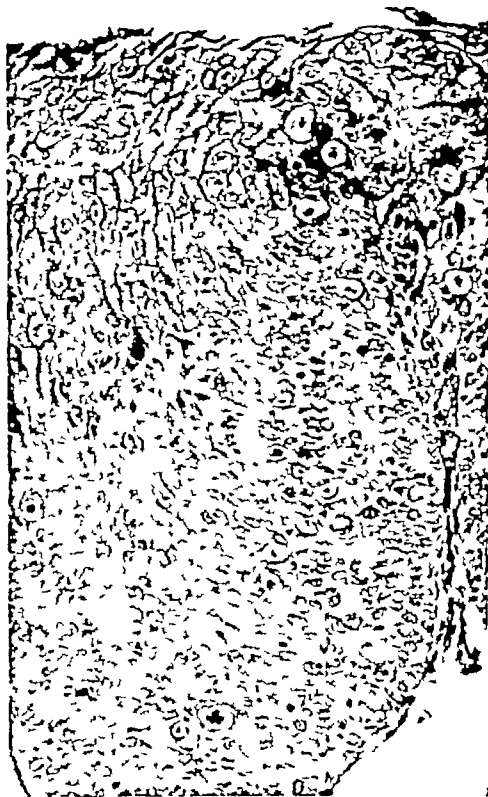


FIG 1, CASE 1— $\times 260$  The lesion on the tongue. A hyperplastic epidermis with atypical cells, hyperchromatic nuclei, atypical mitoses and numerous "corps ronds" (benign dyskeratosis). There is loss of stratification and the basement membrane is intact.

May 20, 1937 One case is that of a man, 52 years old, who claimed to have had the eruption for three years. On the dorsum of the penis and prepuce was a plaque-like, exudative, crusted, and infiltrated lesion resembling exudative eczema. The blood Wassermann reaction was negative. The patient was treated with radium with good immediate results, but recurrence took place. A careful study of the biopsy showed squamous cell epithelioma as well as dyskeratosis of the Bowen type. The second case was in a woman, 60 years old, who had a verrucous tumor extending from the left anal region to the left labia minus and majus. This had been present for years. There had been itching for about ten years

There had been an operation two years previous to presentation but the lesion recurred. The histologic picture was that of an epithelioma of the mixed type (basal-squamous cell epithelioma) with Pagetoid type of reaction. From the clinical and histologic description, it is possible that these might be cases of frank carcinoma.

Stout<sup>37a</sup> reported 3 cases of Bowen's disease affecting mucous membranes. In 1 case the lesion was situated on the anterior nares, in another on the floor of the mouth with metastases to the cervical and supraclavicular glands, and another involving the vocal cords.

A careful search of the literature revealed 50 cases of Bowen's disease affecting the mucous membranes. Including our 2 cases, the total number is 52, 22 were in men, 29 in women. One author did not give the sex of 1 case. The following sites were affected: penis, vulva, vagina, nose, lip, cheek, floor of mouth, palate, uvula, tonsils, and tongue. The age varies from 25 to 81 years with the average being 51.52 years. The average duration of the lesions was 5.07 years. The most effectual treatment seemed to be a combination of surgical or electrosurgical destruction and radiation (x-rays or radium). Five doubtful cases are included in this summary.

### Report of 2 New Cases

*Case 1*—E R, a white female aged 60, was seen by Dr. George M. MacKee in private practice on March 21, 1931, complaining of a pinhead-sized nodule upon the left side of her tongue. The lesion was first noticed by her dentist to whom she had gone for an oral examination one month prior to her visit to Dr. MacKee. The dentist recognized it as an unusual lesion and referred the patient for examination and treatment.

Since there were no subjective symptoms, the patient was unaware of its presence and was uncertain as to when it originated. She thought that it might have started as a canker sore which had been irritated by a rough tooth. The tooth had been filed down so that it was perfectly smooth but the lesion remained.

The past history was essentially negative. The patient did not use tobacco in any form. She had no unusual habits nor did she wear a

dental plate She had had psoriasis for thirty-seven years Her sister also had psoriasis for approximately the same length of time During these thirty-seven years she had had many courses of arsenic in the form of Fowler's solution Her general health was excellent

The physical examination except for the psoriasis and the tongue lesion presented no noteworthy findings There were no palpable glands and no jagged teeth The dentition and oral hygiene were very good The tongue was normal except for one isolated lesion upon the left border opposite the last molar This was a nodule about 3 or 4 millimeters in diameter raised, reddened, and firm The summit of the nodule was slightly eroded, the periphery was firm There were no marked inflammatory changes surrounding the lesion A clinical diagnosis of early prickle-cell epithelioma was considered The tongue was anesthetized with 2 per cent solution of procaine and the lesion was excised widely with the high frequency cutting current.

It was felt that irradiation was indicated without waiting for a microscopic report. Dr Merlin Stone inserted 6 gold radon implants of 1 millicurie each in the surrounding tissue approximately 1 centimeter apart. There has been no recurrence to date.

*Case 2*—S K., a white male, Armenian, aged 55, whose occupation is that of insect exterminator, was first seen in the Dermatological Clinic of the Post-Graduate Hospital on August 21, 1934, complaining of a thickened and pruriginous area just proximal to the corona of the penis upon the dorsal surface. The condition had been present about six months

The past history presented nothing to account for his present complaint except that for the past ten years he had worked as an exterminator. In his occupation he used an arsenic mixture for eight of the ten years. During the last two years he used a mixture of sodium, potassium, and ammonium fluoride. There was no history of syphilis or of other chronic infections The patient denied trauma in this area

The physical examination revealed a healthy middle-aged man. The only noteworthy clinical finding was the lesion on the penis This lesion was proximal to the corona upon the dorsal surface and was 1.5 centimeters in diameter It was infiltrated, raised, circinate, and erythematous The border was somewhat translucent. The central portion measured about 1 centimeter in diameter It was slightly thickened and whitish in appearance, resembling leukoplakia. There were no palpable glands present in the inguinal region. The patient was not circum-

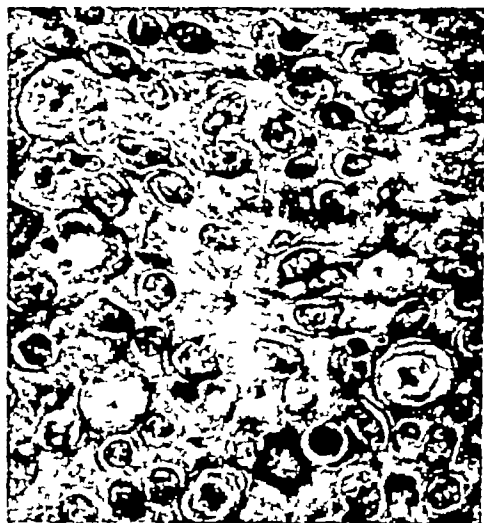


FIG 2, CASE 1— $\times 950$  Higher magnification of Fig 1 showing the details of the abnormal epidermal cells There is marked variation in shape, size, and arrangement of the cells Note also hyperchromatism and clumping of the nuclei.

cised. The genitals were normal in all other respects

Under local procaine anesthesia, the lesion was excised *in toto* The microscopic findings indicated that the lesion had been completely removed. The patient failed to return and all attempts to reach him have been futile as he came to the clinic under a fictitious name and gave an incorrect address

## Histopathology

*Case 1*—Tongue lesion. The specimen consists of a piece of mucous membrane of the tongue in which there is a fairly large patch of acanthosis A sparse round cell infiltration is present. In one area of acanthosis, beginning in the middle of the mucosa, there is a replacement of the old by a newly formed mucosa with its own basal layer and papillae. From the basal layer there is a marked proliferation of epithelial cells which remain for the most part midway differentiated between basal and prickle cells Toward the periphery of this new growth, the cells differentiate abruptly into prickle cells which again show rather abrupt keratinization. In the more differentiated cells are fairly numerous mitotic figures which show irregular polarity of growth. The nuclei show clumping in some places. Other features of anaplasia such as irregularity in size, shape, and staining qualities are also present. Many of the nuclei are quite large and deeply chromatic, the chromatin not





FIG 1, CASE 1— $\times 260$  The lesion on the tongue. A hyperplastic epidermis with atypical cells, hyperchromatic nuclei, atypical mitoses and numerous "corps ronds" (benign dyskeratosis). There is loss of stratification and the basement membrane is intact.

May 20, 1937 One case is that of a man, 52 years old, who claimed to have had the eruption for three years. On the dorsum of the penis and prepuce was a plaque-like, exudative, crusted, and infiltrated lesion resembling exudative eczema. The blood Wassermann reaction was negative. The patient was treated with radium with good immediate results, but recurrence took place. A careful study of the biopsy showed squamous cell epithelioma as well as dyskeratosis of the Bowen type. The second case was in a woman, 60 years old, who had a verrucous tumor extending from the left anal region to the left labia minus and majus. This had been present for years. There had been itching for about ten years.

There had been an operation two years previous to presentation but the lesion recurred. The histologic picture was that of an epithelioma of the mixed type (basal-squamous cell epithelioma) with Pagetoid type of reaction. From the clinical and histologic description, it is possible that these might be cases of frank carcinoma.

Stout<sup>37a</sup> reported 3 cases of Bowen's disease affecting mucous membranes. In 1 case the lesion was situated on the anterior nares, in another on the floor of the mouth with metastases to the cervical and supraclavicular glands, and another involving the vocal cords.

A careful search of the literature revealed 50 cases of Bowen's disease affecting the mucous membranes. Including our 2 cases, the total number is 52, 22 were in men, 29 in women. One author did not give the sex of 1 case. The following sites were affected: penis, vulva, vagina, nose, lip, cheek, floor of mouth, palate, uvula, tonsils, and tongue. The age varies from 25 to 81 years with the average being 51.52 years. The average duration of the lesions was 5.07 years. The most effectual treatment seemed to be a combination of surgical or electrosurgical destruction and radiation (x-rays or radium). Five doubtful cases are included in this summary.

### Report of 2 New Cases

*Case 1*—E. R., a white female aged 60, was seen by Dr. George M. MacKee in private practice on March 21, 1931, complaining of a pinhead-sized nodule upon the left side of her tongue. The lesion was first noticed by her dentist to whom she had gone for an oral examination one month prior to her visit to Dr. MacKee. The dentist recognized it as an unusual lesion and referred the patient for examination and treatment.

Since there were no subjective symptoms, the patient was unaware of its presence and was uncertain as to when it originated. She thought that it might have started as a canker sore which had been irritated by a rough tooth. The tooth had been filed down so that it was perfectly smooth but the lesion remained.

The past history was essentially negative. The patient did not use tobacco in any form. She had no unusual habits nor did she wear a



FIG 4, CASE 2 — $\times 950$  A portion of Fig 3 is magnified to show details of the tumor cells. Bowen's "clumping cells," hyperchromatism of the nuclei, mitotic figures and loss of stratification are to be noted.

papillary outgrowth beyond the old corneum. In the most advanced part of the lesion the expansion of the epidermal "pegs" by the new growth compresses the papillae into narrow strands, sometimes pinching off a part or even completely obliterating them. A remnant of the old epidermis can be seen as a narrow band of compressed nuclei surrounding the newly formed epithelial pegs. In no place is there any extension of the new growth beyond the basal cell layer. In conclusion this section shows Bowen's dyskeratosis with proliferation of the squamous cells forming an intra-epidermic, grade two, prickle-cell carcinoma.

Drs. J. Frank Fraser, the late Alexander Fraser, David L. Satenstein, and Fred Weidman studied the slides and agreed with the above findings. Dr. Hamilton Montgomery also studied the sections and concluded that they showed squamous cell epithelioma *in situ*, Grade 2, simulating the picture of Bowen's disease.

In discussing the pathology of Bowen's disease one should keep in mind the original histopathologic findings of Bowen. He reported marked proliferation of the rete Malpighi, karyokinetic divisions and amitosis, clumping of the nuclei, and vacuolization of the cells. In the more advanced lesions, there was edema of the epidermis, hypertrophy of the horny layer, hyper-

keratosis, and parakeratosis with cells not having undergone cornification but showing nuclei surrounded by "membranes" or clear spaces. In the cutis were enlarged vessels surrounded by a cellular infiltrate most of which were plasma cells. The elastic fibers were unchanged.

It is impossible to dwell here at any considerable length upon the individual histopathologic conceptions of the various authors who have contributed to the knowledge of this subject. We shall attempt to summarize the prevailing trend.

There is primarily a hyperplasia of epithelial cells, the features correspond to an intra-epidermic epithelioma with certain peculiar dyskeratotic changes in the proliferated prickle cells. This latter feature segregates this condition into the separate entity "Bowen's Disease." The cells proliferate in all directions, usually beginning with the basal cell but always remaining above the *membrana propria*. The proliferated cells may be either basal or prickle, usually however, both types of cells are present. They differentiate rapidly and show early keratinization not infrequently as concentric "pearls" and "corps ronds." Individual cells show amitosis and disordered polarity, others show irregularity of outline, size, shape, and the cells appear to clump themselves together. The nuclei and protoplasm stain more deeply than the surrounding normal cells.

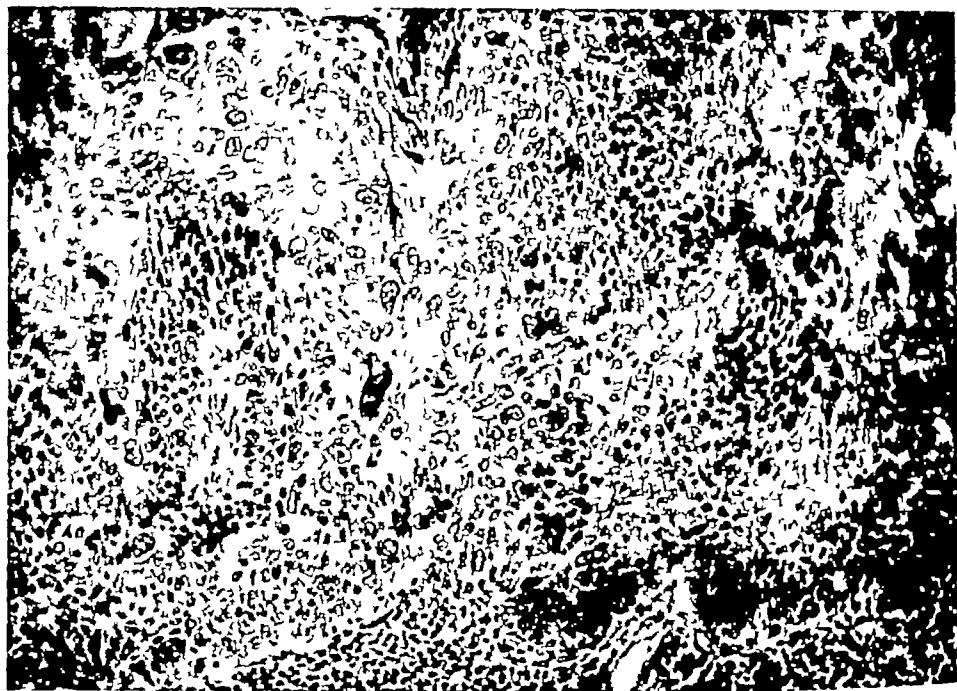


FIG 3, CASE 2— $\times 260$  Lesion from penis The epidermis is markedly hyperplastic and basal cell layer is well preserved Many atypical cell forms and marked poikilocarynosis are seen throughout the section In the subpapillary region is seen an inflammatory infiltrate of round and plasma cells

infrequently being broken up into fine granules The old epidermis can be seen as a thin strand covering the outer surface of this new growth Although cells proliferate in all directions they do not break through the membrana propria of the mucosa In conclusion this section shows Bowen's dyskeratosis with proliferation of the squamous cells forming an intra-epidermal grade two, prickle-cell carcinoma

The late Dr J. Jadassohn<sup>28</sup> briefly examined the pathologic slide of this case when he was in the United States several years ago and it was his opinion at that time that this was not a typical case of Bowen's disease but represented a dyskeratosis of the Bowenoid type, which because of its site of origin would show a somewhat modified dyskeratosis He said that he knew of no other classification in which to place it

**Case 2—Penile lesion** The epidermis shows a considerable length of marked acanthosis which at one end gradually tapers down to normal width In the papillary and subpapillary layers of the corium of this area is a dense plasma cell infiltration which is most extensive in the most acanthotic area and gradually becomes more and more sparse as the epidermis ap-

proaches the normal The essential feature of the lesion, however, is a replacement in the most acanthotic area of the old by a new epidermis which shows the features of a squamous cell epithelioma This begins as a marked proliferation of the basal cells which spreads out in all directions within the membrana propria They remain midway in differentiation for about one half the extent of their spread and then they differentiate rather abruptly into prickle cells Early as well as advanced keratinization is seen Whorls and pearls are also present Here and there individual cells show an abnormal type of keratinization giving the appearance of the so-called "corps ronds" of Darier These cells also show marked irregularity in growth, polarity, and other features of anaplasia The nuclei show great irregularity in size Some are very large and some show multiplication by amitosis, resulting in the clumping of four to six nuclei in the one large cell There is also marked variation in the density of the nuclear chromatin, some nuclei staining very densely while others are vesicular and frequently fragmented into fine granules New papillae, acting as centers of the same type of growth, appear in many parts of the epidermis In one place there extends a

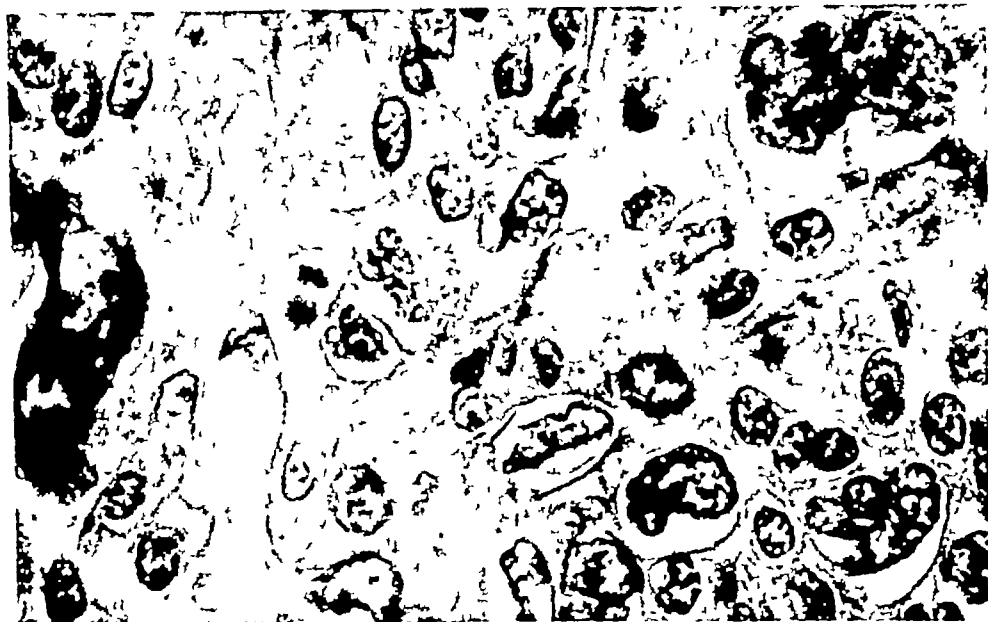


FIG 4, CASE 2 — $\times 950$  A portion of Fig 3 is magnified to show details of the tumor cells. Bowen's "clumping cells," hyperchromatism of the nuclei, mitotic figures and loss of stratification are to be noted

papillary outgrowth beyond the old corneum. In the most advanced part of the lesion the expansion of the epidermal "pegs" by the new growth compresses the papillae into narrow strands, sometimes pinching off a part or even completely obliterating them. A remnant of the old epidermis can be seen as a narrow band of compressed nuclei surrounding the newly formed epidermal pegs. In no place is there any extension of the new growth beyond the basal cell layer. In conclusion this section shows Bowen's dyskeratosis with proliferation of the squamous cells forming an intra-epidermic, grade two, prickle-cell carcinoma.

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Some cells are four to six times larger than normal ones and contain shrunken, deeply staining nuclei eccentrically placed. Other cells contain several nuclei. Vacuolization and intracellular edema are constant features. Mitotic figures are abundant. The disorderly arrangement of the cells in the rete Malpighii is very characteristic of all cases of Bowen's disease.

"Grains" which represent broken-up nuclei in the keratinized cell bodies of the horny layer are seen in all cases of Bowen's disease involving the skin.

Heimann<sup>39</sup> as early as 1916 mentioned that Bowen's disease is not a precancerosis. In 1928, Fraser<sup>40</sup> showed conclusively that the process was one of malignancy from inception. Nicolas, Massia, and Rousset<sup>19</sup> in their studies upon Bowen's disease of the mucous membrane came to the conclusion that it was not a pre-epitheliomatous dyskeratosis but a true intra-epidermic cancer from a clinical and especially a histologic standpoint.

The transformation of Bowen's disease from an intra-epidermic to an infiltrating carcinoma has been discussed infrequently. Darier<sup>41</sup> reported a case in which he had observed transformation to an infiltrating carcinoma with metastatic foci. Others to report this were Danel<sup>42</sup> and Favier.<sup>43</sup> Later Fraser reported Wise's case<sup>44</sup> showing infiltration through the membrana propria. The following findings were significant. The anaplastic cells of the epidermal pegs were broken through the membrana propria and infiltrated the cutis in irregularly shaped buds. It is the opinion of many that Bowen's disease is an intra-epidermic epithelioma and becomes malignant only when it breaks through the basal layer to infiltrate the cutis. A change of Bowen's disease of the vulva to squamous cell epithelioma was reported by Fuhs,<sup>45</sup> whereas Grütz<sup>44</sup> demonstrated the formation of a basal cell epithelioma in a case of Bowen's disease. Sequeira and Turnbull<sup>46</sup> showed the presence of basal and squamous cell carcinoma in Bowen's disease. Civatte<sup>46</sup> contends that basal, squamous, as well as mixed basal-squamous cell epithelioma may develop in Bowen's disease, although the clinical picture may be the same.

Delbanco<sup>7</sup> is of the opinion that Bowen's disease is the precancerous stage of squamous cell epithelioma. Montgomery,<sup>47</sup> however, feels that some ordinary squamous cell epitheliomas of the mucous membrane and other tissues present the histologic features of Bowen's disease. It is a matter of interpretation. If we accept the histologic description of Bowen's precancerous dermatosis as it was given origi-

nally by Bowen, then our 2 cases and others reported are those of Bowen's disease. If one interprets strictly the histologic findings in the light of present-day exactness, Bowen's disease of the mucous membrane can be interpreted as an intra-epidermic epithelioma *in situ* with features of Bowen's dyskeratosis. When the basal cell layer is broken, or when metastases are present the tumor should then be designated as an infiltrating epithelioma. The type of epithelioma depends upon the proliferating cells. Usually these are of the prickle or of the mixed type. This latter stand is justifiable and is a safe one because a case of squamous cell epithelioma would be treated with more thoroughness than one of Bowenoid dyskeratosis. Among others to conclude that Bowen's disease is not a precancerosis but an actual carcinoma *in situ* from its very inception are Hudelo and Cailliau,<sup>48</sup> and Mantegazza.<sup>49</sup>

From our review of the cases in the literature and from personal communications with students of this subject, and from our own observations of our 2 cases, we agree with those who consider Bowen's disease of the mucous membranes as an intra-epidermic epithelioma. The type of epithelioma that eventually results depends upon the cellular changes that take place. For the most part, however, the cases reported, including ours, show squamous cell epithelioma *in situ* Grade 2. Some of the reports show clinically papillomatous proliferations in leukoplakic areas similar to many cases of frank carcinoma. Some reports even record enlarged regional lymph nodes, one cannot help but conclude that some cases reported as Bowen's are really those of true carcinoma.

Bowen,<sup>1</sup> Darier,<sup>41</sup> Fraser,<sup>40</sup> Montgomery,<sup>47</sup> and others have shown that some cases of Bowen's disease and arsenical keratoses resemble one another histologically. The relationship of arsenic to epithelioma and Bowen's disease has been brought to our attention by Anderson<sup>47</sup> and Montgomery.<sup>47</sup> Anderson found large quantities of arsenic in his case of Bowen's disease as well as in cases of multiple benign superficial epithelioma. Among others to report cases of epithelioma, Bowen's disease, and other similar conditions in patients who had taken arsenic in one form or another over a number of years, are Schamberg,<sup>50</sup> Fraser,<sup>40</sup> Goldberg,<sup>51</sup> Levin,<sup>51</sup> Ormsby and Mitchell,<sup>52</sup> Doty,<sup>53</sup> Hartzell,<sup>54</sup> Wende,<sup>55</sup> Fordyce,<sup>56</sup> MacKee,<sup>57</sup> Oliver,<sup>58</sup> Schwartz and Busman,<sup>59</sup> Stillians,<sup>60, 61</sup> Pfahler,<sup>61</sup> Andrews,<sup>62</sup> and Montgomery.<sup>47</sup> Graham Little<sup>63</sup> demonstrated the relationship of erythema troid benign epithelioma to psoriasis but failed to indict arsenic as a causative factor. Cheever<sup>64</sup>

reported a case of Paget's disease of the nipple and multiple epithelioma in a patient who had had psoriasis since infancy. It is reasonable to assume that these last 2 cases received arsenic at some time in the treatment of their psoriasis.

In this connection, it is interesting to note that both cases which we report have come in contact with arsenic. The woman had repeated courses of Fowler's solution over a period of thirty-seven years for the treatment of psoriasis. The other case which we report is a man who was employed as an insect exterminator. He came in contact with arsenic-containing insect powders for eight years. He no doubt inhaled and ingested large quantities of arsenic. Pozzo<sup>22</sup> brought to our attention the fact that glycosuria may be a cause of Bowen's disease since his 3 cases showed not only glycosuria but pruritus of the genitals. On the other hand, the case of Bowen's disease described by Touraine and Golé,<sup>23</sup> also had cheilitis glandularis. They observed squamous cell epithelioma in 8 out of 11 cases of cheilitis glandularis and suggested the idea that cheilitis glandularis is a precancerosis.

The clinical appearance of this dermatosis as it affects the mucous membranes are nearly as varied as the number of cases reported. The lesions reported were found to fit into three general types: (1) erythroplasia-like, (2) nodular or papillomatous, (3) ulcerative. These clinical types correspond to the 3 pathologic stages described by Richon.<sup>4</sup> It is, therefore, evident that the differences in clinical characteristics are due to the pathologic stage at which the lesion has progressed. The following is a brief description of the evolution of the clinical stages of Bowen's diseases of the mucous membrane.

1 Early Stage. The lesions are reddish, well circumscribed, glossy, slightly infiltrated, painless, and not ulcerated. Frequently they are covered with a heavy scale. The base of the lesion is soft. Slight pruritus may be present. The general health is good and the regional nodes are not enlarged.

2 Latent Stage. The lesions may remain as in the early stage for a long period. Changes may occur extremely slowly. The lesion tends to become nodular and even papillomatous in this stage and is frequently covered with a mucoid substance which causes crust formation. The base of the lesion becomes infiltrated to a noticeable degree. There is a tendency to eczematization and frequently ulceration.

3 Late Stage. The nodular or papillomatous areas tend to ulcerate. The base becomes deeply infiltrated. Glands may become palpable and it is in this stage that metastases occur.

*Treatment*—If a tentative diagnosis of Bowen's disease is made of a lesion on the mucous membrane, we advise prompt treatment. The area around the lesion should be thoroughly anesthetized with procaine solution. The whole lesion or a portion of it should be removed with scalpel or skin punch and sent to the laboratory for histologic examination. The entire affected area should then be destroyed by radical scalpel excision or by electrosurgery. We believe that postoperative irradiation with roentgen rays, radon seeds or radium element needles or plaque will assure success of the operative procedure and will prevent recurrences. If the condition has already become invasive and involves regional nodes, then radical treatment for metastatic carcinoma should be instituted. We advise against treating these lesions with caustics, electrolysis, ultraviolet radiation, or with solid carbon dioxide. They should be treated adequately and radically at the very start. Improper treatment may activate a relatively benign process into a malignant one.

## Summary

1 Two cases of Bowen's precancerous dermatosis of the mucous membrane are reported, 1 of the tongue and 1 of the penis.

2 A clinical diagnosis of Bowen's disease of the mucous membrane cannot be made with certainty. It can only be suspected and then confirmed microscopically.

3 The histopathology shows dyskeratosis typical of Bowen's disease and an intra-epidermic or infiltrating epithelioma of peculiar cellular characteristics. These changes are undoubtedly present from the inception of the lesion.

4 Arsenic may play a role in the etiology of Bowen's disease.

5 The literature on this subject is reviewed.

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We are indebted to Dr MacKee for permitting us to report 1 case from his private practice and 1 case from the clinic, and to the late Drs J Jadassohn and Alexander Fraser, as well as Drs J Frank Fraser, David L Satenstein, Fred Weidman, and Hamilton Montgomery for their help in interpreting the histologic slides.

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## Discussion

Dr Timothy J Riordan, *New York City*— Besides reporting 2 cases of cancerous Bowen's disease, of which 1 is a "first," namely, the case involving the tongue, the authors offer a praiseworthy piece of work in reviewing the literature of the condition affecting mucous membranes. Since the final diagnosis of many diseases of the mucous membranes including the one under discussion depends on the interpretation of the microscopic findings and since there are some differences of opinion in the histologic interpretation, this review is timely. If we break down the review from the standpoint of the pathologic reports, we note that most of the cases reported contain no more than mere mention of the fact that the microscopic examination showed Bowen's disease. A few intimated epitheliomatous changes and a few reported epitheliomas with the change characteristic of Bowen's disease. Unquestionably the information given by Bowen originally was not defective. The reports following Bowen did not contain defective information. The question arises, however, whether in some cases the information, though not defective, could have been incomplete. The concept that lesions of Bowen's disease are cancerous from incipency was promulgated some years back and I believe it is gaining adherents right along. In my own training under the late Drs. W J Highman and

Alexander Fraser, I was brought up, so to speak, with that concept. Mention was made of Dr J Frank Fraser's work proving that concept. It is cause for wonder how many cases with features of Bowen's disease have been diagnosed histologically as epithelioma and remain so classified because features of Bowen's disease present were considered secondary. I recall one such case in my limited experience. What I am trying to express is that in the light of our present attempts at exactitude, we may be confusing the issue because of improper classification. And so to me at least, it is a challenge to the histopathologist. The clinician can expect a varying report just as the breakdown of this review revealed varying reports for the same condition. And in the beginning, I said the authors report 2 cases of cancerous Bowen's disease, but we must read the reports to find out.

As to arsenic playing a role in the etiology, I have nothing to say except that the accumulation of cases in the literature where arsenic was ingested creates the impression that it plays a role. We can't accept impression as fact.

As to treatment, the fact that the lesion affects the mucous membranes and may become malignant cancer even unto metastasis and death although remaining in a stationery phase for a long time, merits serious judgment in dealing with it. If we biopsy the lesion, we must destroy it entirely and if the lesion is confined to the epidermis, surgery or electrosurgery is enough. The destruction should extend a little beyond the border. This disease is an example of one that can be adequately destroyed by the so-called "hot-nail" treatment. Often these lesions well circumscribed clinically may show change a little beyond the border. In dermatologic practice we feel more secure perhaps in following the destruction with the use of x-ray.

Dr Marion B Sulzberger, *New York City*—We must all be indebted to the presenters for their excellent historical survey of cases of Bowen's disease of the mucous membranes.

Dr Cipollaro has been quite right in stating that the case which formed the subject of my thesis to acquire the doctor degree at the University of Zürich, in 1925, was one of a combination of Bowen's disease, leukoplakia, kraurosis, cancer, and pruritus of the vulvar mucous membrane. Dr Delbanco of Hamburg later called attention to the frequency of the combination of kraurosis and leukoplakia. As Dr Cipollaro further stated, the case which I worked up in my doctor's thesis was the same as the one presented at a medical meeting by my chief, Professor Bloch. In this 80-year-old woman, all attempts at therapy were unavailing, until a permanent cure was effected by complete vulvectomy.

Regarding the question of *precancerosis*, whether or not one calls a condition a precancerosis depends greatly upon one's definition of cancerosis or cancer. If one considers a condition which is *noninfiltrating*, produces little or no inflammatory reaction, in many cases never metastasizes, in many cases never destroys the local tissues, in many cases remains quiescent, localized, and entirely benign for many years, or for the lifetime of the patient—if one calls such a condition a "cancer," then one can speak of Bowen's disease as a cancer. But if one does not consider that the description I have just given characterizes "cancer," then Bowen's disease is not a cancer. Nevertheless in the majority of these lesions, provided the patient lives long enough, a true, typical, metastasizing, destructive, and malignant lesion eventually supervenes. And this is in my mind the real meaning of the term "precancerosis"—a lesion which as a rule is not itself malignant but in which as a rule malignant changes will eventually occur.

### THOSE FIRST IMPRESSIONS

When your patient is delayed in your waiting room, he has a chance to make a few observations. The housewife will note the cleanliness and order of the surroundings. She will observe the draperies, the condition of the decorations, the pictures on the walls, the floor coverings, the lighting effect, the furniture. If she is a new patient, while she waits she formulates some rather definite ideas about the man whom she is soon to meet and to whom she is about to commit her case—he is clean and sanitary or sloven and careless, he is orderly and systematic or hap-

hazard and negligent, she is favorably impressed or critically suspicious before she has even seen her physician, she is predisposed to like him or not like him. And to give further detail to the picture, the secretary may add some bold color—a pleasant or an irritating manner, a tell-tale conversation over the phone, etc. A good or a bad psychology has been created while your patient waits, a factor not wholly unrelated to the success of your later treatment.—*Stanley R Mauck, Exec Sec, Columbus Acad of Med, in Ohio State M J*



# THE VALUE OF STEREOSCOPIC PNEUMOGRAPHIC STUDIES IN THE DIAGNOSIS AND LOCALIZATION OF RENAL AND URETERAL CALCULI

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**I**N A limited number of cases of renal lithiasis, our present methods of x-ray study may not only fail to prove the presence of a stone but also may be of little or no value in locating, with any degree of accuracy, the position of a renal or ureteral calculus. Frequently, a plain abdominal roentgenogram is of questionable aid in those cases of renal lithiasis in which the density of the stone is quite similar to that of the soft structures of the body. Furthermore, in such cases, the use of any of the more popular kinds of pyelographic media, in an attempt to confirm the diagnosis by means of a negative shadow at the site of the calculus, may prove quite disappointing. In those cases of renal or ureteral lithiasis in which surgery is indicated, an exact preoperative knowledge of the location of the stone is most desirable. All too frequently, because of the marked similarity in density of the calculus and the more frequently used types of pyelographic media, such information cannot be obtained.

With the hope of developing a method that would give us more positive information with reference to the presence and location of renal and ureteral calculi in those cases in which our routine procedures failed, we decided to make a comparative study of the density of the more common types of renal calculi and the more popular kinds of pyelographic media (Table 1).

From this study, we were impressed by the contrast value of air as a pyelographic medium in selected cases. Furthermore, air is readily available and costs nothing. Because of the reported

deaths following inflation of the bladder (Mathé) and following perirenal insufflation (Hyman and Wilhelm) we felt that additional investigations should be made before attempting its clinical use.

The use of air and other gases in the study of the urinary tract is not new. Keller,<sup>1</sup> in 1904, was the first to use air to study pneumocystadiography. Burkhardt and Polano,<sup>2</sup> in 1906, while studying pneumocystadiography, were the first to suggest using oxygen to fill the renal pelvis in order to detect the presence of calculi. Von Lichtenberg and Dietlen,<sup>3</sup> in June, 1911, were able to demonstrate on the x-ray film the presence of renal calculi by the use of oxygen as a contrast medium. At the suggestion of Willie of the Mayo Clinic, Cole,<sup>4</sup> in October, 1911, carried out pneumopyelography on a case of marked hydronephrosis with a questionable stone shadow. He was able to rule this shadow out with the aid of stereoscopic pneumopyelograms. He pointed out that it was not necessary to insert the catheter all the way to the pelvis, that air accentuates the calculus shadow and air can be readily withdrawn, and that what little remains is probably absorbed without harm to the patient.

Granger<sup>5</sup> reported 2 successful cases in 1916. Thompson,<sup>6</sup> in 1922, used oxygen under a pressure of 180 mm Hg in a case of hydronephrosis without reaction. He felt that after the patient has discomfort on the side being investigated, an additional pressure of 20 mm Hg should be used to obtain satisfactory detail of the pelvis and calyces. He also noted that after a certain pressure the

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Syracuse, April 25, 1939*

oxygen would escape alongside the ureteral catheter to the bladder, thereby giving a means of regulating the intrapelvic pressure and lessening the probability of an air embolus. Clark,<sup>7</sup> in 1923, followed the technic outlined by Thompson Braash<sup>8</sup> reproduced in his book on urography an excellent air pyelogram showing a stone. He claims that it is too difficult to fill the pelvis completely and to differentiate the pelvic outline from gas in the surrounding bowel. Eichler,<sup>9</sup> in 1935, while studying extravasation in the kidney, in conjunction with pyelographic media, used oxygen for contrast. In 1938, Hughes<sup>10</sup> reported a series of 500 pneumopyelograms without serious reaction.

In 1867, Demarquay<sup>11</sup> found that oxygen could enter the vein directly without endangering the life of the dog. Gärtner,<sup>12</sup> in 1902, and Stürtz,<sup>13</sup> in 1903, showed that oxygen could enter the vein directly, and that one-fifth of the normal oxygen requirements for fifteen minutes could be injected without killing a dog. Lewin,<sup>14</sup> in 1898, found that when compressed air was forced through a water suspension of methylene blue and gum arabic, the presence of air seemed to facilitate the passage of the suspension into the renal tubules, lymphatics, and vessels. Nicholich,<sup>15</sup> in 1913, thought that air entered the circulation of the kidney after it had passed from the bladder up the ureter to the pelvis. Santini,<sup>16</sup> the same year injected air under considerable pressure into the dog's bladder, and found that the normal bladder would rupture before air would enter the kidney pelvis by way of the ureter. Graves and Davidoff<sup>17, 18</sup> showed, however, that fluids will pass from the bladder into the kidney pelvis by way of the ureters. Poddighe,<sup>19</sup> in 1914, was unable to confirm the observations of Santini. Furthermore, he was unable to produce death from air embolism in the dog by injecting air into the ureter to the kidney under considerable pressure. Postmortem examination revealed huge dilation of the pelvis, calyces, and tubular system, and compression of the glomeruli,

TABLE 1

Density of Calculi		Density of Media	
Uric acid	0.97	Air nitrogen-oxygen	0.001
Xanthin	1.00	Water	1.00
Cystin	1.18	*Water (distilled)	0.997
Ammoniated magnesium phosphate	1.20	*Sodium iodide 15 per cent sol	1.11
Calcium phosphate	1.25	*Skodan 15 per cent sol	1.11
Calcium carbonate	1.33	*Diodrast (i.v.) 35 per cent wt./vol	1.18
Calcium oxalate	1.36		

\* The writers are greatly indebted to Dr. H. C. Hodge of the Department of Biochemistry and Pharmacology for his work in the determination of the densities of these media. Data on density of calculi taken from Köhler.

but the air was not found in the cardiovascular system. He also found that if the veins of the bladder were traumatized, air inflation of the bladder would lead to death from embolism in a few minutes.

Thomas and Sweet,<sup>20</sup> in 1923, found that if air was injected by way of the ureter into the pelvis of a dog it would enter the venous system at a pressure of 150 to 200 mm Hg. Hinman and Lee-Brown<sup>21</sup> have showed that solutions are also readily absorbed by the veins of the pelvis. Fuchs,<sup>22</sup> and Burger and Fuchs,<sup>23</sup> in 1927, found that if air was injected into the pelvis by way of the ureter of rabbits the pelvis would gradually dilate, and suddenly air bubbles could be seen in the renal vein after entering the venous circulation of the calyces. The animal died within a few minutes. They believed that the resorptive power of oxygen in the venous system was not sufficient for protection against fatal emboli.

After reviewing the literature and critically taking into consideration the possibility of air embolism, which had been the constant fear of workers in the past, we undertook a series of experiments on dogs.

Six female dogs were studied, using nembutal for anesthesia, giving 25 mg per kilogram intravenously. The bladder was opened suprapubically and a catheter passed to each kidney (Fig. 1). Three different experiments were performed on each dog.

*Experiment 1*—The bladder was filled with sterile saline solution so that the ureteral orifices were completely immersed. A catheter was passed to each

kidney, manometer attached, and air forced to each pelvis. If the pressure in the renal pelvis was sufficiently high, the air would return down the ureter to the bladder. In order to produce this, it was found that on the average of 11 cc of air under an average pressure of 70 mm Hg for three minutes was required.

*Experiment 2*—Ureteral catheters were passed, the ureters and kidneys exposed, and ties placed around the ureters in order to prevent a return of air to the bladder. When air was passed through the catheter it was found that the ureter and kidney became enlarged and tense, and suddenly small foamlike air bubbles began to pass through the renal vein (Fig. 1). The average conditions required to produce this were an average volume of 28 cc of air under an average pressure of 170 mm Hg for seven minutes.

*Experiment 3*—Experiment 2 was repeated on dogs within an hour after they had been sacrificed. The average volume of air required was 15 cc under an average pressure of 75 mm Hg for four minutes. It is at once obvious that experiments performed on dead structures may be misleading.

Although the series was small, the results obtained were so uniform in character that one felt justified in drawing certain conclusions concerning the clinical possibilities of pneumopyelography. The results in the above experiments varied little if any with different types and sizes of catheters. It was found that satisfactory pneumopyelograms could be obtained on dogs under a pressure of 20 to 30 mm Hg. It is evident from the pressure range in the above experiments that the margin of safety is such that little risk would attend clinical application.

## Method

The patient is prepared in the usual manner for cystoscopy, and we have the manometer of the Wappler cystometric set in readiness for use. Ureteral catheters, preferably number 7 whistle tip, are passed. After specimens, cultures, and differential phenolsulfonphthalein

studies have been made, pneumopyelograms are obtained.

A 20 cc. Luer syringe with a tight fitting barrel is connected with a T tube which leads to the manometer and the ureteral catheter (Fig. 1). The syringe can be used with greater ease and the leakage of air around the barrel can be prevented if the plunger is lubricated with sterile glycerine before the air injection is started. The air is injected very, very slowly, at a pressure of 20 to 30 mm Hg, until the patient experiences very slight pain. If the pressure tends to rise above 30 mm Hg, the tension on the barrel of the syringe is lessened until the pressure returns to the desired level and the procedure is continued again as described above. As our experience with pneumopyelography increased, we were able to estimate pressure fairly accurately without the aid of the manometer and we discontinued its use. When desired, as much of the air as possible can be immediately withdrawn and retrograde skioidan pyelograms obtained. It was found that the pneumopyelogram could be followed immediately by a pyelogram with skioidan with no increase in the reaction on the part of the patient.

## Observation from Clinical Studies

In the clinical group, 95 patients were studied and pneumopyelography was performed in different upper urinary tract conditions, namely renal calculi with and without hydronephrosis, hydronephrosis, pyelitis, tuberculosis, polycystic kidneys, and ureteral calculi. In this group were 39 males and 56 females, varying from 16 to 71 years of age. The cases with essentially normal pelvis and slight hydronephrosis required an average of 12 cc. of air under a pressure of 20 to 30 mm Hg, where there was marked hydronephrosis, more air under the same range of pressure was necessary to fill the pelvis. One case required 120 cc of air to elicit slight pain, and we were able to rule out definitely suspected cholelithiasis by means of stereoscopic pneumopyelogram. We concluded that pneumopyelogram

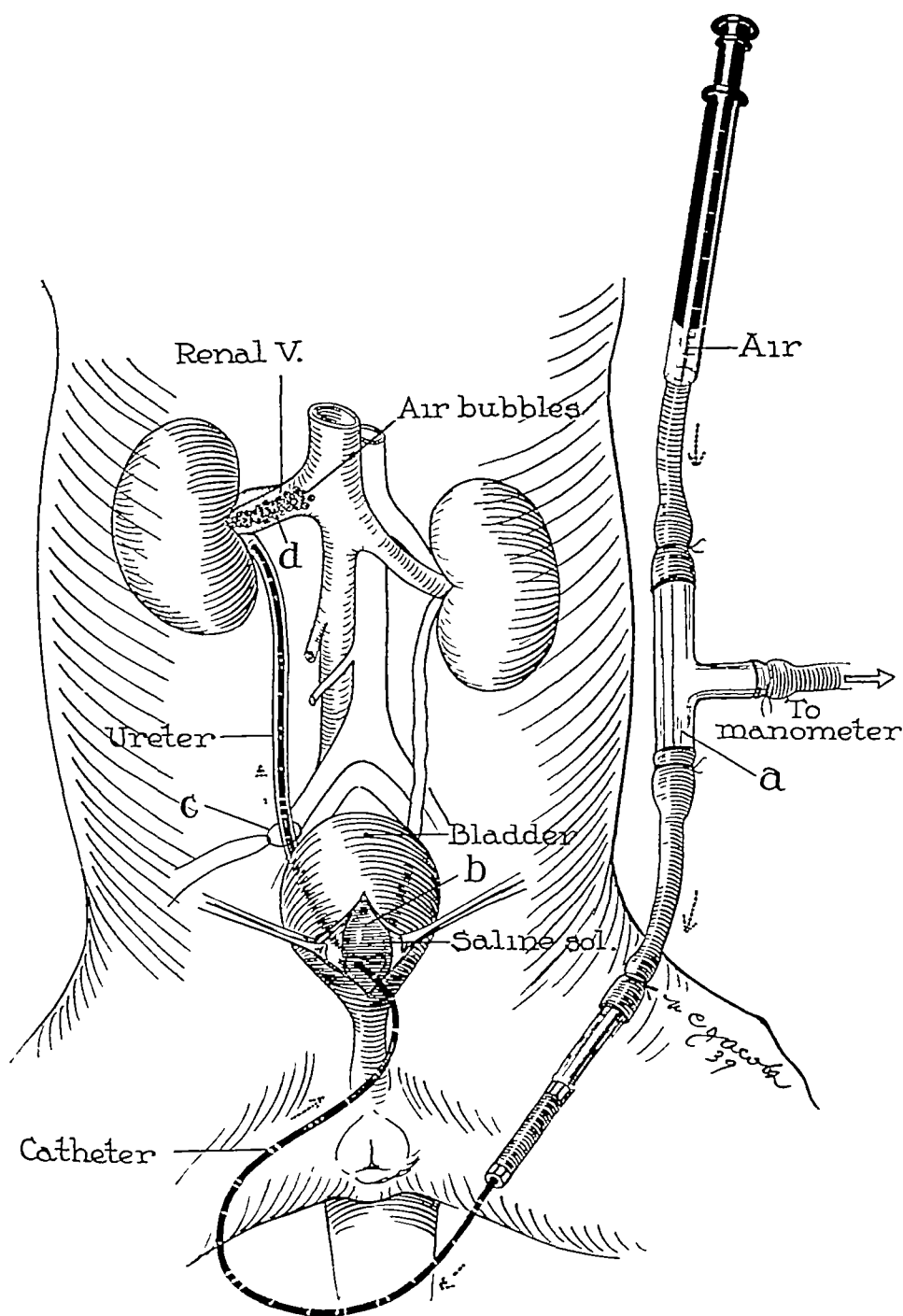


FIG 1. Diagram of dog experiments. (a) Method of controlling pressure and measuring volume, (b) exposed bladder filled with saline solution, (c) ligature around ureter was pulled tight in experiment 2 to prevent return of air to bladder, (d) passage of air bubbles through renal vein in experiment 2.

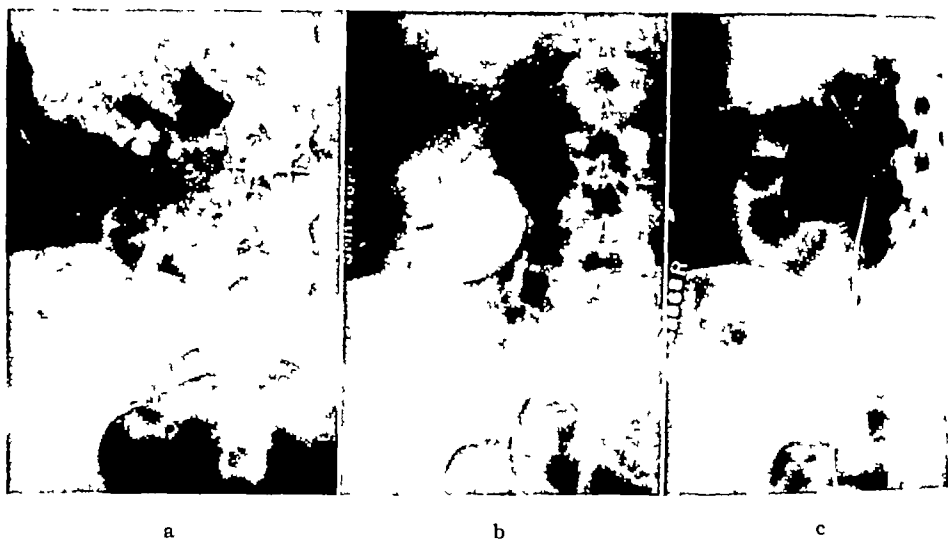


FIG 2, CASE 1 (a) Flat plate showing shadows in kidney region, (b) marked hydronephrosis with high insertion of ureter, localization of calculi not possible, (c) stereoscopic pneumopyelogram shows exact location of calculi

raphy is best suited for cases in which one suspects or is dealing with calculi, while in the other conditions mentioned above, the media in common usage are to be employed. The following cases, with brief history and figures, are representative of our clinical study of those patients in which we were dealing with calculi.

*Case 1*—A A, female aged 45, on admission complained of pressure in the abdomen and sharp pain in the region of the right hip. She was anemic and was tender in the right lower quadrant, and the right kidney was palpable. Studies of bladder urine were negative. Blood chemistry studies and phthalein test were normal. X-ray of the abdomen showed two shadows over the region of the right kidney compatible with renal calculi (Fig 2a). The phthalein output for thirty minutes was 15 per cent for each kidney. Bilateral stereoscopic pyelograms using skiodan showed marked hydronephrosis of the right kidney with stricture of the ureteropelvic junction and high insertion of the ureter into the pelvis (Fig 2b). Bilateral stereoscopic pneumopyelograms showed two calculi, one in the pelvis and one at the mouth of the inferior calyx (Fig 2c). A Foley Y plastic operation, pyelolithotomy and nephropexy were performed and the post-operative course was uneventful.

*Case 2*—G C, female aged 57, complained of pain in the right thigh, pain over the bladder nocturia, and a weight loss of thirty pounds in two years. She was anemic, had myocardial

changes, and the right kidney was palpable and tender. Blood chemistry studies and phthalein test were normal. Urine showed many pus cells and *Escherichia coli* was grown from it. X-ray of the abdomen showed bilateral renal calculi (Fig 3a). The left kidney urine showed *Escherichia coli* on culture, and the phthalein output for thirty minutes was 30 per cent on the right side as compared to 25 per cent on the left side. Bilateral stereoscopic pyelogram using skiodan showed bilateral hydronephrosis with narrowing of the left ureteropelvic junction (Fig 3b). Bilateral stereoscopic pneumopyelogram showed that the calculi in the right kidney were located in the three dilated lowermost calyces and kidney pelvis, while in the left kidney one stone was found in the dilated superior calyx, one in the pelvis, and three in the inferior calyx (Fig 3c). Because of her poor physical condition, she was placed on palliative treatment consisting of mandelic acid therapy and dilations of the left ureteropelvic junction with pelvic lavage. She is responding very well. The stones in the left kidney will be removed and a plastic operation will be performed in the near future.

*Case 3*—F O, female aged 51, on admission complained of intermittent pain in the right upper quadrant for eight months frequently, and burning. Her heart was moderately enlarged and she had tenderness over the right kidney region anteriorly. Her urine showed a few pus cells and *Escherichia coli*. Blood chemistry studies and phthalein test were



FIG 3, CASE 2 (a) Flat plate showing shadows in region of both kidneys, (b) bilateral hydro-nephrosis with obstruction at left ureteropelvic junction, localization of calculi not definite, (c) stereoscopic pneumopyelogram showing exact location of renal calculi

normal X-ray of the abdomen showed two shadows in the right kidney region (Fig 4a) *Escherichia coli* was grown from the urine of the right kidney, and the phthalein output for thirty minutes on the right side was 10 per cent as compared to 45 per cent on the left side. Bilateral stereoscopic pyelograms using skiodan showed hydronephrosis and hydroureter on the right side with some tortuosity of the ureter (Fig 4b). Bilateral stereoscopic pneumopyelograms showed two calculi in the mouth of the two major calyces (Fig 4c). In view of her age, poor phthalein output of the right kidney, and infection with *Escherichia coli*, nephrectomy was performed with an uneventful postoperative course.

*Case 4*—B S, female aged 31, on admission complained of pain in the left flank, frequency urgency, and burning. She was under treatment for syphilis and stated she had had pyelitis on the left side a year previously. There was slight tenderness in the left costovertebral angle. Her urine contained pus cells and *Escherichia coli*. X-ray of the abdomen showed a very indistinct shadow in the region of the upper pole and a fairly well-defined shadow in the lower pole of the kidney, suggesting calculi (Fig 5a). The phthalein output in thirty minutes was 20 per cent from the right kidney and 25 per cent from the left. Bilateral stereoscopic pyelogram using skiodan obscured both shadows, thereby confusing the picture from the standpoint of



FIG 4, CASE 3 (a) Flat plate showing shadows in kidney region, (b) and (c) note localization of stones in pneumopyelogram (c) as compared with pyelogram with denser medium (b)

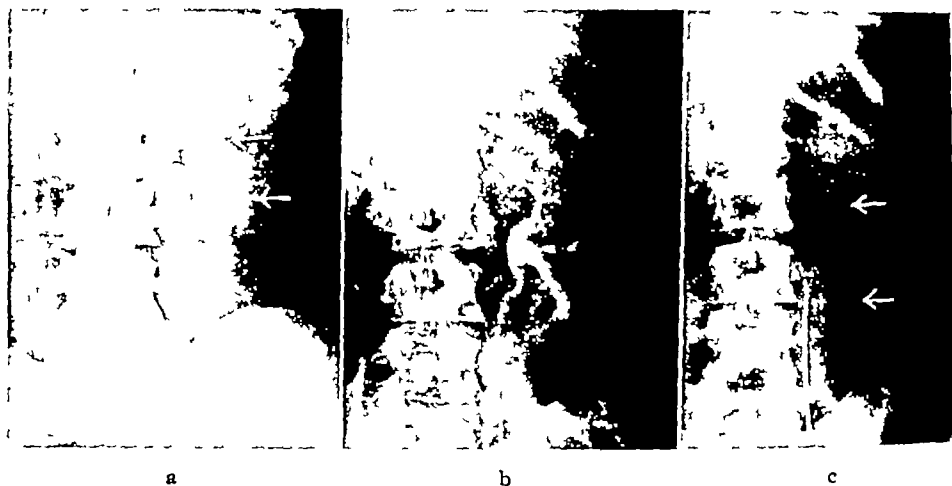


FIG 5, CASE 4. (a) Arrows point to questionable stone shadows in flat plate, (b) and (c) contrast pyelograms with skiodan and air, the latter accentuating and localizing questionable shadow in upper pole

diagnosis and localization of the calculi (Fig 5b) Bilateral stereoscopic pneumopyelogram not only accentuates the shadow in the upper pole, but also definitely localizes both shadows and leaves no question as to the diagnosis of renal calculi (Fig 5c) She was placed on palliative treatment consisting of mandelic acid therapy and high vitamin acid ash diet

Case 5—J R, male aged 51, on admission complained of sudden and severe pain in the left flank seven hours before admission He had experienced similar attacks during the past year Urine showed a few pus cells, a few red blood cells, and staphylococcus albus Blood chemistry studies and phthalein test were normal X-ray of the abdomen showed a shadow in the lower right ureter and in the upper left ureter, compatible with calculi (Fig 6a) Staphylococcus albus was grown from the urine of each kidney and the phthalein output for thirty minutes was 20 per cent for either kidney Bilateral stereoscopic pyelogram using skiodan showed early hydronephrosis in the left kidney (Fig 6b) Bilateral stereoscopic pneumopyelogram showed a stone in the upper portion of the left ureter (Fig 6c) Left ureterolithotomy was performed with an uneventful postoperative course The stone in the right ureter was removed by manipulation with catheter, bougies, and instillation of 2 per cent avertin

### Discussion and Summary

The writers are of the opinion, from their own experimental and clinical observations and from a study of the results

obtained by others, that pneumopyelography is safe if one observes the precautions that were pointed out under the discussion of the method

It is at once evident that air is the cheapest of all pyelographic media

Although we do not advocate the routine use of pneumopyelography, we believe that there are certain conditions that have to do with the diagnosis and location of renal and ureteral calculi in which stereoscopic pneumographic studies will give information that cannot be obtained by other methods In those cases of renal calculi in which the stone shadow in the flat x-ray plate varies so slightly in color from the shadows cast by the soft tissues in its immediate neighborhood that there is grave doubt as to whether or not a stone is present, stereoscopic pneumopyelograms so accentuate the stone shadow that there can be no question as to diagnosis

Also, in those cases in which the surgical removal of the calculus is contemplated, the difference of density between the more common types of renal and ureteral calculi and air is usually such that pneumopyelography gives the operator a much better idea of the exact location of the stone or stones than could be obtained by the use of a denser medium Such preoperative knowledge shortens

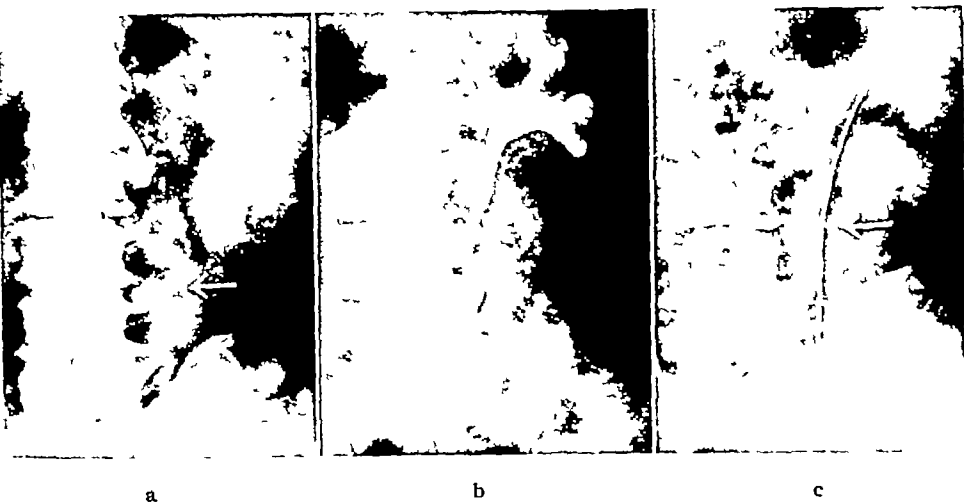


FIG 6, CASE 5 (a) Shadow in flat plate suggesting stone in upper third of ureter, (b) and (c) ureterograms with skiodan and air, showing definite localization with the latter

the time of operation and decreases tissue trauma

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### Discussion

Dr Augustus Harris, Brooklyn, New York—  
Dr Scott has demonstrated, not only by experi-

ments on dogs, but also by clinical application in 95 patients, that pneumopyelography is a safe procedure

Fear of the possibility of complicating air embolus undoubtedly explains why this method has not been more generally adopted as a diagnostic procedure, at least in selected cases. The writer has never injected air into the renal pelvis

We can agree that nonopaque and faintly opaque calculi in the ureter, pelvis, and calyces not infrequently fail to be demonstrated. Pain has often been typical of reno-ureteral obstruction in cases where careful studies have definitely excluded other pathologic forms of obstruction

To be sure, the value of the wax-tipped filiform bougie must not be overlooked in obtaining a scratch in ureteral stone. Phosphatic, uric acid, urate, and other putty-like stones may either fail to be seen or their actual number may not be determined. It is in this type of case that air injection should offer its greatest field of usefulness. Where possible, the actual number of calculi present in the kidney should be known before surgery is attempted. Air obviously offers greater contrast to shadows than any other medium now employed. In spite of improved radiography, we believe that 15 to 25 per cent of small calculi may fail of demonstration under present methods

Manometric control of air pressure as prescribed by Dr Scott, if carefully used, should afford the operator greater assurance of its safety. We believe Scott's method deserves special study and a fair clinical trial



Dr Elmer Hess, Erie, Pennsylvania—Anyone who knows Winfield Scott knows how thoroughly he goes into a given problem and realizes that his conclusions, as a rule, are sane, conservative, and constructive. The method with which he has approached the pneumopyelogram evidences the value of animal experimentation before clinical trial is attempted. It has been my privilege to attempt pneumopyelograms in several instances without benefit of this experimentation, and in rare cases have I found some diagnostic help from this procedure. The fear of air embolus seems to be more of a theoretic deterrent than an actual one, and I myself have

never seen such a complication following aerograms or pneumopyelograms. My experience has been limited to just a very few patients and for that reason I am not qualified to discuss this type of diagnostic procedure with too much authority. It does seem that in certain types of renal and ureteral calculi a carefully done pneumopyelogram will be of valuable diagnostic aid, particularly in those cases which ordinarily do not show a stone by a plain film. This is another very valuable contribution to our diagnostic armamentarium. The work has been thoroughly done and the conclusions are conservative and sound.

### TO DOT THE STATE WITH TUMOR CLINICS

The establishment of a chain of tumor clinics in strategic centers in the upstate area is one of the major goals of the new state cancer control program which is being administered under the supervision of Dr Louis C Kress, director of the recently reorganized Division of Cancer Control, says *Health News* (Albany). The clinics will be so located that a patient anywhere in the state need not travel more than fifty miles from his community to procure adequate treatment. At present there are twenty-six such units upstate, and several more are in process of organization. *Health News* will publish, in the near future, a complete list of these clinics together with information as to procedure in obtaining services.

So far as possible, each clinic will be organized according to standards established by the American College of Surgeons. Consultants will be provided to aid clinic staffs in diagnosing and treating the disease and to render consultant service on request to local physicians. A complete and up-to-date record of x-ray and radium equipment throughout the state will be maintained so that needs may be determined and aid given,

where possible, in obtaining adequate therapeutic facilities.

Another feature of the new program is the reporting of cancer, effective January 1, of this year, which will make available more accurate mortality and morbidity records with respect to site, type, occupation, age, sex, color, and geographic distribution. Reporting is expected to shed light on many obscure points regarding the occurrence of human cancer. Cases are already being reported at the rate of about forty a day.

The Division of Cancer Control plans to hold meetings at which physicians, surgeons, radiologists, pathologists, and other specialists in cancer control may assemble and discuss individual problems. It will also sponsor a program of popular education designed to acquaint laymen with the symptoms of cancer and the importance to patients of seeking immediate medical attention at the first indication of the disease.

Through the application of these and other measures it is estimated that at least 2,300 lives may be saved each year in the state outside of New York City.

### SALVAGING FACIAL WRECKAGE

For centuries it has been the custom in India for a husband, discovering his wife unfaithful, to cut off her nose. The ancient surgical technique of replacing the noses of these indiscreet wives is still used by the plastic surgeon, who today must replace noses cut off in automobile accidents, Dr Claire L Straith, of Detroit, plastic surgeon, told members of the Buffalo Academy of Medicine, meeting in the Buffalo Museum of Science, recently.

A flap of skin is cut from the forehead and laid over the nose structure until the skin adheres. Then the surplus is clipped off and put back on the forehead. Modern women, who usually wear their hair low over the forehead thereafter to hide a slight, resulting scar, are merely following a precedent set by ancient Indians, the doctor explained. In ancient Italy physicians grafted

skin on noses by tying one of the patient's arms up to his nose, but this method has been abandoned.

Dr Straith illustrated with many pictures the method of building new noses and brought a local woman to the platform to show the finished result.

The most horrible facial disfigurements today result from automobile accidents, the Detroit surgeon reported, adding that 80 per cent of those disfigured are passengers in the right front seat. He criticized some automobiles having instrument panels bristling with knobs and protruberances, which, he said, rip faces and smash skulls. Automotive designers are making safer instrument panels now, he reported. He recommended the use in automobiles of crash padding such as some airplanes have.

# THE MODE OF ACQUISITION OF LYMPHOGRANULOMA VENEREUM OF THE ANORECTAL TYPE

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White Plains, New York

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Medical College)

IT IS our belief that lymphogranuloma venereum of the anorectal type is acquired in males by the deposition of the virus of the disease upon the perineal region, anus, or within the anal and rectal lumina. A similar mechanism may exist in the case of the female in whom, however, it is more difficult to obtain satisfactory details as to the probable site of deposition of the virus

Bensaude and Lambling<sup>1</sup> studied 158 cases of anorectal lymphogranuloma venereum in France, 78 of which were in males and 80 in females. They reported in 1936 that they had obtained a statement of coitus per anum in 80 per cent of the infected males. Bensaude and Lambling concluded that the disease in the male began in the rectal mucosa and traveled through the rectal wall ultimately involving all of the elements of the wall. It was regarded as evidence in support of this contention that 78 males showed concomitant stricture and active inflammation of the rectal mucosa. In the case of the female, Bensaude and Lambling were of the opinion that, owing to the intimate connection between the vaginal and perirectal tissues, the disease began in the latter tissues and spread inward through the rectal wall. According to that hypothesis, the rectal mucosa was the last of the elements of the rectal wall to be involved in the disease. In support it was claimed that of 80 women with stricture, only 12 showed accompanying active inflammation of the rectal mucosa. It would appear, therefore, that Bensaude and Lambling employed the relative frequency of the co-existence of proctitis and stricture to indicate the site of entry

of the virus of lymphogranuloma venereum into the rectal wall. A high ratio of proctitis to stricture indicated an extraluminal infection, a low ratio, an intraluminal infection.

Little definite information upon the site of entry of the virus was gained from a consideration of the presence of inguinal buboes in the infected individuals. Of 90 persons with concomitant proctitis and stricture only 24 showed past or present evidence of inguinal involvement.

Very recently additional evidence has been produced that lymphogranuloma venereum can be acquired by young female children solely by contact with an infected source. In March, 1939, Sonck<sup>2</sup> in Scandinavia, reported the occurrence of 5 cases of the disease in girls whose ages were respectively, 9, 4, 9, 8, and 7 years. In each instance the mother showed a positive Frei reaction and was passing blood and pus per anum. Three of the 5 children were sisters and slept in the same bed as the mother who, in addition to the active rectal disease, presented many discharging sinuses in the abdominal wall in the neighborhood of the colostomy opening. Three of the children, when first examined, had a concomitant stricture and proctitis, the latter being manifested by the passage of blood and pus per anum. In another child proctitis developed five months after the appearance of the stricture and in the 5th there was rectal ulceration without stricture.

The material reported in this paper has been taken from the files of the Lymphogranuloma Clinic of the New York Hospital, 169 consecutive cases of

lymphogranuloma venereum, all with positive Frei reactions, were considered and were subdivided into the following clinical entities

	Cases
(a) Anorectal manifestations alone	108
(b) Inguinal manifestations alone	50
(c) Anorectal and inguinal manifestations concurrently	4
(d) Esthiomene alone	3
(e) Latent disease—no manifestations	2
(f) Esthiomene and anorectal manifestations	1
(g) Pelvic and anorectal manifestations	1

### Race and Sex Distribution

#### (a) Anorectal manifestations alone

	Total	White	Colored	Porto Rican	Red Indian
Men	53	45	4	3	1
Women	55	16	36	3	0

#### (b) Inguinal manifestations alone

	Total	White	Colored	Porto Rican
Men	46	33	10	3
Women	4	2	2	0

#### (c) Anorectal and inguinal manifestations concurrently

White men	3
Colored men	1

White males accounted for 42 per cent of this series of cases of anorectal lymphogranuloma venereum, they formed the largest individual group. It was probable that this preponderance over colored women (who are usually regarded as supplying the largest number of cases of anorectal lymphogranuloma venereum) was artificial and due to the type of clientele received at the New York Hospital.

(a) *Individuals Showing Anorectal Manifestations Alone*—In this clinical picture there was the passage of blood and pus per anum, frequent and small bowel movements, and occasionally tenesmus and abdominal pain. The proctoscopic picture was that of an acute or chronic inflammation of the lower bowel wall, in most instances a stricture was present. No significant difference between the 2 sexes was noted in the frequency of the concomitant occurrence of proctitis and stricture. In most, proc-

titis and stricture were both present. It was not possible, in any instance, to detect the presence of enlarged lymphatic glands in the pelvis.

(b) *Individuals Showing Inguinal Manifestations Alone*—Proctoscopic examination was made of these individuals on admission and at three or six monthly intervals thereafter. In none was there involvement of the bowel either at the time of the acute inguinal condition or at any period up to, in some instances, as long as fifteen years after the infection of the inguinal glands.

(c) *Individuals Showing Anorectal and Inguinal Manifestations Concurrently*—In each of the 4 cases examined the bowel involvement was in a very early stage with acute inflammation and ulceration of the anal and perianal tissues. It was felt that the purulent inguinal adenitis resulted from the infection in the perianal and anal areas.

Of the 114 cases of anorectal lymphogranuloma included in this study 53 were available for inquiry regarding their sexual habits. Fifteen of these were women. Twenty-four of the 38 men and 5 of the 15 women acknowledged having had passive rectal intercourse during the period that the lymphogranuloma infection probably occurred.

Circumstantial evidence indicates that a number of the men who denied having had rectal intercourse were not telling the truth. One, a taxicab driver, was impotent with his wife and admitted oral relations with men but denied rectal intercourse. Another man had been employed as an usher in a theater and acknowledged passive fellatio but denied rectal relations. Ten of the men were well acquainted with the practice of anal intercourse but denied that they had participated. The occupations of these men were as follows: a Pullman porter, a hospital porter, a waiter, a bookkeeper, a clerk, a mechanic in the navy, a handyman, a gas station attendant, a butcher, and a steel worker. The last 2 of this group were worthy of suspicion because one gave the unlikely story of having noticed symptoms of his disease shortly

after he had used some "dirty wet toilet paper" which he had picked up from the floor of a public toilet and the other indicated from his attitude and facial expression that he was not telling the truth.

One other man gave the story of having infected himself through the use of "bits of paper" picked up from the floor of a public toilet. His experience in giving plausible stories might have obtained for him the benefit of doubt had it not been for the statement of his wife that they had had sexual relations only once or twice in the previous three years and the further statement that her husband had recently been arrested in a subway toilet for having sexual relations with men.

Of the remaining 2 men who denied having had rectal intercourse one was a mechanic who took enemas for constipation and the other was a Porto Rican young man, twenty-two years old, who had already had a colostomy because of a lymphogranulomatous stricture. He had been given enemas in Porto Rico frequently by his mother since childhood. The same enema tube had been used with his 9 siblings, by his parents, and by 1 or 2 of the servants in the house.

Ten of the 15 women did not admit having had rectal intercourse. One of these acknowledged that she had had relations from the rear with her husband, but that penetration had been confined to the vagina. She had noticed that her husband had a yellowish discharge from his urethra. A Porto Rican woman who had been married, divorced, and married again, denied rectal relations but said she sometimes bled from the rectum following sexual relations, and that immediately after these relations she had a desire to move her bowels.

Of the remaining 8 women, 7 were Negro women and the other was a white married woman. She and 4 of the colored women had heard of rectal intercourse. Of the 3 colored women who did not admit knowledge of rectal intercourse, one had been twice married and was promiscuous in her sexual relations, another admitted she was promiscuous in her sexual relations, and the third gave the

story that she lived with a woman who had a vaginal discharge.

The proximity of the vaginal and anal orifices and the frequency of some form of vaginal discharge probably accounts for a large proportion of anorectal lymphogranuloma in women. Infection could be transferred to the rectal mucosa purely by the action of gravity and probably through the preliminary maneuvers of the male in effecting vaginal penetration.

From information obtained from the women included in this study it is probable that infection is often transmitted to the rectal mucosa through the careless use of douches and enema tubes. Four of the 10 women who denied rectal intercourse acknowledged that they gave themselves enemas immediately after vaginal douching, using the same apparatus with the exception of the nozzle. Moreover, a woman in giving herself an enema inserts the nozzle after passing it by the vaginal orifice.

Some physicians may have difficulty in getting a history of rectal intercourse in cases of anorectal lymphogranuloma and it may be desirable to comment upon the technic employed. One of the authors of this article is a psychiatrist who has had a number of years' experience in the study of psychosexual maladjustment. This experience was exceedingly helpful in dealing with patients who came primarily to be treated for a physical disease and who might resent an inquiry in which abnormal sexual relations were suggested.

In all cases it seemed desirable to conceal the fact that the interview was being conducted by a psychiatrist and no reference was made to sexual behavior until after a somewhat detailed and routine medical history had been obtained and the confidence of the patient had thus been secured. At first, circumstantial evidence was obtained, such as the occupation, the experience with women and the preference for men or women as social companions. Then the patient might be asked whether as a boy, other boys had pretended he was a girl or whether other

men teased him or whether men approached him for sexual purposes. The final specific information regarding passive rectal intercourse was usually the last obtained. With most of the patients it seemed advisable to conclude this part of the inquiry in one interview as the patient was in this way taken off guard and did not have an opportunity to elaborate an untruthful response.

The resistance on the part of men to acknowledge passive rectal intercourse is due, in large part, to the fact that among the group of sex variants and by men as a whole the passive rectal relationship is a mark of femininity. The man who thus submits himself is likely to be regarded with utmost contempt. The majority of such men are exceedingly insecure and feel defeated. Some of them actually wish they were women.

As a rule the women who have had rectal intercourse and who have acquired rectal lymphogranuloma have little desire to conceal their sexual habits. Often they have submitted to men under protest and the subsequent rectal infections make them communicative regarding the source of the infection.

### Comment

In our series, the observation of Bensaude and Lambling that proctitis and rectal stricture do not frequently co-exist in women has not been confirmed. We feel, therefore, that one of the chief pillars of support of their hypothesis of a mode of production of anorectal lymphogranuloma venereum in women different from that in men is of doubtful strength. The case reports of Sonck already quoted show that anorectal lymphogranuloma venereum can be acquired by the female without the deposition of the virus intravaginally. An additional case report of Sonck (not quoted above) makes it clear that infection of the anorectal mucosa can be produced by anal intercourse with a lymphogranulomatous individual. It may be argued that, although the virus is deposited upon the mucosa it subsequently travels to the pelvic glands and invades the rectal wall from without. If

such were the case, one would expect to find palpable enlargement of the pelvic glands as occurs in individuals with primary syphilis of the rectum. One does not, however, encounter demonstrable pelvic adenopathy in anorectal lymphogranuloma venereum. The conclusion is inescapable that the anorectal mucosa is an excellent medium for the propagation of the virus of lymphogranuloma venereum.

The frequent history of anal intercourse in males who present no previous manifestations of lymphogranuloma venereum and the absence of anorectal symptoms as a sequel to the inguinal disease leaves little doubt that most cases of anorectal lymphogranuloma venereum in males are acquired by the deposition of the virus upon the perianal region, the anus, or within the anal and rectal lumina. It is also very probable that many cases of the disease in women arise in the same fashion.

### References

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- 2 Sonck, C. E. Acta dermat. venerol. 20 No. 4 171 (March) 1939.

### Discussion

Dr David Bloom, *New York City*—Dr Grace, in expressing the opinion that the great majority of males affected with the rectal type of lymphogranuloma venereum acquire this disease by direct inoculation of the virus through passive pederasty, shares this belief with many French authors, like Rachet and Cachera, Ravaut, Caminopetros, and others. This assumption is based mainly on the admission of many males in their series that they practice passive pederasty. Thus, it seems to me, may perhaps mean only that these men belong to a certain stratum of population. To make it somewhat more convincing, the frequency of this mode of sexual practice should have been also investigated among males affected with the inguinal type of the disease and with chancroid and the figures compared with those found in males affected with the rectal type of the disease.

As to the other argument, namely, that very few of these rectal patients give a history or show signs of preceding inguinal bubo—this fact is true. But it has been explained satisfactorily and convincingly as follows: the patient who develops inguinal bubo is not likely to get rectal

involvement, for he is protected against the deeper penetration of the virus into the pelvis. For the bubo represents the battlefield of the virus with the organism, the latter being the victor. The cases of Kornblith, Oury and collaborators, Reichle and O'Connor, Cézary and collaborators, and of others, which demonstrate the development of pelvic and rectal disease in spite of the precedence of a typical inguinal bubo show that in some cases the virus is the victor over the glandular tissue and thus is able to advance unhampered deeper into the pelvis and toward the rectum. These thorough and detailed reports serve very well to enlighten us without any doubt about the mechanism of migration of the virus from the genitals to the rectum when it is not stopped by the inguinal lymph glands.

The third argument in favor of the intrarectal mode of inoculation in males was given by Lambing, namely, that in these patients, in contradistinction to females, there is a higher proportion of proctitis without stricture than with rectal stricture. This has been denied by Dr. Grace, and I agree with him. For also in the patients whom I have observed this difference between men and women has not been seen. Even in a patient with absolutely certain intrarectal inoculation it has been observed by Seneque that the virus behaves in the rectal tissues like in the inguinal region, namely, it starts with a tiny lesion in the mucosa then invades the anorectal glands of Gerota which suppurate, and thus facilitates ulceration of the mucosa and later the development of stricture.

Because of the above reflections the conception of Dr. Grace is unacceptable to me. Not because this mode of infection is impossible do I disagree. Such cases with absolutely certain intrarectal infection have been observed by others and myself. I disagree because this

theory seems to me not to be based on entirely convincing deductions.

How then are the majority of cases of rectal involvement in males explained in regard to the mechanism of infection?

It is true that the lymphatic circulation in men is different from that in women. In women the nearness of the rectum to the posterior vaginal wall and the direct lymphatic drainage of the vagina and the cervix to the deep pelvic glands explain easily the mechanism of development of rectal disease. This is not the fact in men in whom the lymphatics of the genital region drain mostly into the superficial inguinal glands. But it should be remembered that the glans penis, the sulcus coronas, and the corpus cavernosum have also lymphatics draining into the deep inguinal glands from which lymph vessels go to the iliac glands. Besides, there are also present—although few—lymphatics which lead directly into the deep pelvic glands. These anatomic conditions make it possible, therefore, for the virus to reach the pelvic glands and the rectum without affecting the superficial inguinal lymph glands. Another possibility of inoculation must be thought of, namely, that of the posterior urethra. Such cases have been reported by Mathewson. Many cases of rectal stricture in males have been observed by him, in which urethritis preceded the rectal involvement, and it is his belief that this mode of infection is to be blamed for many cases of rectal disease in males.

For all these reasons I share the opinion of Gatellier and Weiss who, at the French Congress of Surgery in 1934, have stated that the majority of cases of rectal involvement in men have acquired their infection, like women, by the genital inoculation of the virus which has migrated by the way of the lymphatics toward the perirectum and rectum.

## HOW TO LOSE PATIENTS

Proper sanitary and sterile precautions should be synonymous with every doctor's office, but unfortunately this is not always the case. There is, of course, no excuse for this condition. Many patients have been repelled by the failure of the physician to observe the rules of ordinary cleanliness, both personal and in the use of instruments and dressings. These careless habits of the physician may represent an innate quality which is difficult to correct. The older physician will seldom recognize any necessity for reform along these lines, but the younger man should realize the danger involved in these undesirable habits and guard against the tendency of their accentuated expression as he grows older in practice.

Competition among physicians today is too acute to warrant a careless disregard for some of these seemingly unimportant details. In cities and towns where medical facilities are now concentrated, with a free choice among a number of competent physicians, the proper regard for some of these factors will account for the success of one man in contrast with the failure of another.

In building a practice today, the physician should not disregard the psychological factor, which may be determined by impressions gained from the surroundings in his own office.—Stanley R. Mauck, Exec. Sec., Columbus Acad. of Med., in *Ohio State M. J.*

# Case Reports

## CARCINOMA OF THE COLON OCCURRING IN A GIRL OF 13 YEARS

WILLIAM B RAWLS, M D , New York City

**A**N ITALIAN female, aged 12 years, 11 months was first seen November 19, 1937, when she complained of pain and soreness over the entire abdomen, anorexia, weakness, and loss of weight. Since May, 1937, she had noticed that, when engaged in violent exercise, there was moderate pain in the upper left quadrant which recurred at infrequent intervals and was unrelated to food intake. She continued to attend school and engaged in normal physical activities until the middle of August when she again complained of weakness and anorexia. The pain over the upper left quadrant was more frequent and there was a slight loss of weight. As on the previous occasion there was no nausea or vomiting and no blood in the stools. The symptoms gradually increased in severity and in November, 1937, there was constant pain and soreness over the entire abdomen, marked weakness, anorexia, mild nausea, and constipation. The weight had dropped from 86 to 74 pounds.

**Physical Examination**—Patient appeared acutely ill, emaciated, and dehydrated. The head, neck, and throat were negative. There were no palpable glands in the neck or axillae. The heart and lungs were normal. Abdomen there was considerable distention and tenderness over the entire abdomen although it was more marked over the upper left quadrant. The

abdomen had a doughy feeling. A mass about the size of a small orange was felt over the transverse colon close to the splenic flexure. No glands were palpable in the skin or other regions. The liver and spleen were normal.

**Laboratory Examinations**—Urinalysis acid, pale amber, albumin, sugar, and acetone negative, indican positive, rbc rare (Benzidine negative), 1-2 wbc per high power field, large amount of mucus, one hyaline cast, many squamous epithelial cells, few round epithelial cells, few cylindroids. Blood count rbc 4,530,000, hemoglobin 78 per cent, wbc 9,200, polymorphonuclears 55, lymphocytes 42, mononuclears and eosinophiles 0, basophiles 1, myelocytes 2. Schilling count segmented 37 stab 18, myelocytes 2, Schilling index 0.54 multiple index 8.64.

**Röntgen-ray Examination** (Dr Ramsay Spillman)—Examination of the chest, in P A and lateral projections, showed no evidence of disease. Films of the abdomen before any barium was given showed a stippled calcification in the left upper quadrant which was not confined to the limits of an apparently normal kidney shadow. This calcification was at the level of the second and third lumbar bodies with the



FIG 1 Calcification in left upper quadrant. It was shown by lateral projection to be well anterior to the vertebral column. It was not in either the kidney or the spleen.



FIG 2 Two attempts at barium enema failed to fill the colon beyond the splenic flexure. A small amount of barium was given by mouth and this film was made on the following day. This is an oblique, almost lateral, projection of the splenic flexure region. The involved colon is surrounded on all sides by the calcification.

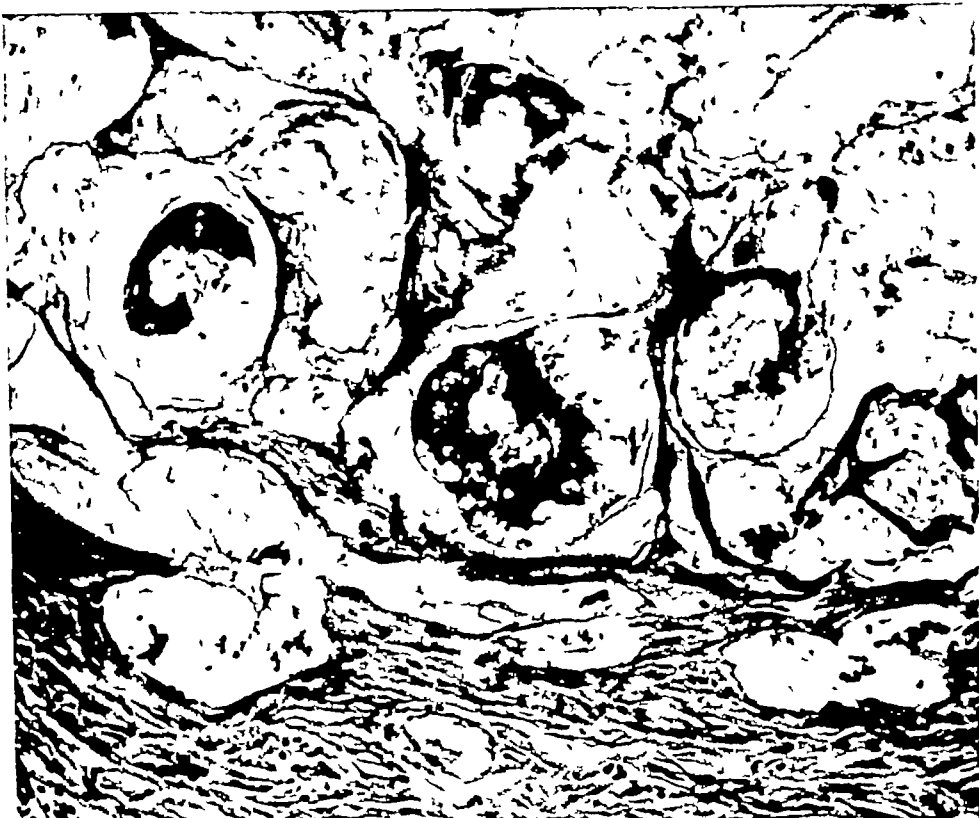


FIG 3 Microscopic examination showing remnants of small glandlike structures and signet ring cells of the so-called mucinoid or colloid carcinoma

patient supine, and shifted only slightly with the patient standing. It was too low and too far medial to be in the region of the normal spleen, and no shadow of an enlarged spleen was found (see Fig 1).

Two barium enemas were given but no barium passed the splenic flexure. A small amount of barium was then given by mouth and exposure made twenty-four hours later. The barium from above formed a continuous shadow in the transverse and descending regions of the colon but the transverse colon for about an inch proximal to the splenic flexure showed considerable constriction and the calcification could be seen on all sides of this part of the colon. The colon appeared to run through the calcification as a stove pipe through a wall. There was considerable stenosis of the colon, though there was no dilatation on the proximal side (see Fig 2).

The age of the patient and the presence of calcification suggested a tuberculous process. An exploratory operation was advised and performed on December 6, 1937, by Dr Robert E. Brennan who made a preoperative diagnosis of malignancy.

**Operative Procedure**—A left rectus incision was made below the costal arch. A large quantity of serous fluid was evacuated. A hard, infiltrating mass presented itself, surrounding the splenic flexure, a portion of the transverse colon,

and involving the surrounding omentum. The anterior parietal peritoneum, small intestine, and pelvis were studded with small, hard nodules. The transverse colon was brought *in situ* proximal to the mass and a mushroom catheter inserted to overcome the partial obstruction. A small piece of the tumor mass was removed for histologic study and the abdomen was closed in the usual manner.

**Pathologic Report** (Dr Aaron S. Price)—The specimen consisted of a tumor nodule, measuring approximately 2 cm in diameter, which was firm and had a colloid-like appearance suggestive of malignancy.

Microscopic examination showed a nodule from the omentum which was densely infiltrated with mucinous exudate. Scattered through the material were remnants of small glandlike structures and some typical signet ring cells of the so-called mucinoid or colloid carcinoma, usually primary in the gastrointestinal tract. With a known mass of the lesion in the colon, the lesion was probably primary at that point (see Fig 3).

The patient made an uneventful recovery from the operation and left the hospital in about two weeks. She was then referred to Dr George T. Pack for roentgen-ray treatment and was admitted to Memorial Hospital on January 5, 1938, where she remained until February 20, 1938. During the stay in the hospital she re-



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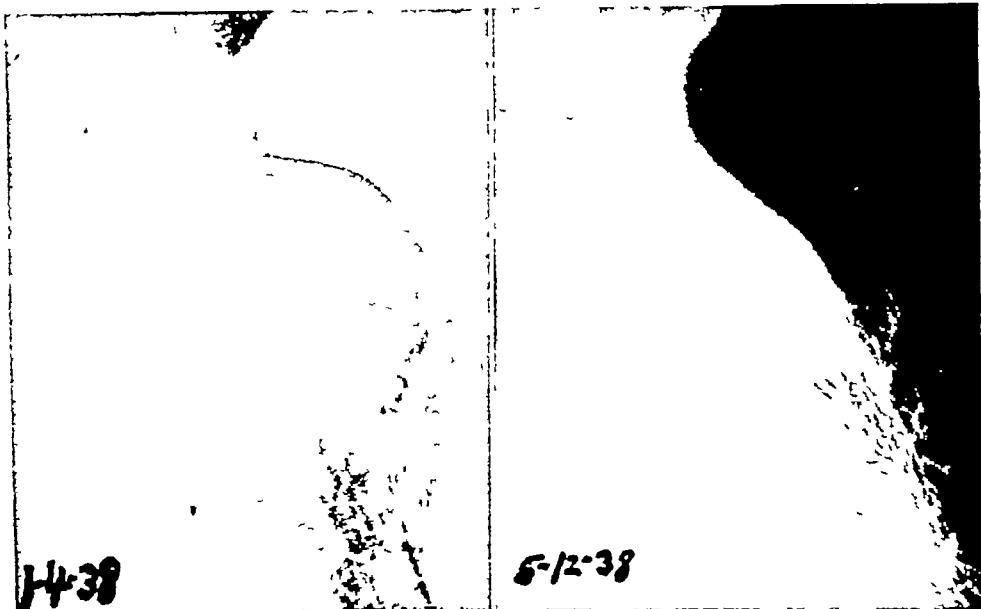


FIG 1

under which this process takes place. It does not occur in every case, even under conditions which look the most favorable. The laminations (in healing) may be in some way due to a successive deposition. Gradually the aneurysm may become filled even to the mouth and in this way permanent healing may be affected."

The outlook is certainly always grave in a fully developed aneurysm of the aorta and any form of medical treatment that may retard its progress and possibly lead to a cure is noteworthy. It is surprising, however, that the current modern textbooks on medicine either fail to mention venesection for aneurysm or do so only to point out its limitations.

Edgar V Allen<sup>2</sup> in *Musser's Internal Medicine*, states "There is no known medical treatment for aneurysm, except restricted activity and prescribing of a diet low in calories, in an attempt to reduce arterial pressure." Meakins<sup>4</sup> in his textbook *Practice of Medicine*, states "The second line of attack is the hope of preventing the local tumor from further enlarging, and at the same time promote local thrombosis. The essentials of this treatment are rest and a concentrated diet." He does not mention venesection.

Malcolm Goodridge<sup>5</sup> in *Cecil's Textbook of Medicine*, states "The various measures to increase the coagulability of the blood, which have been suggested, such as frequent small bleedings—are of little value."

Henry A Christian<sup>6</sup> in *Osler's Principles and Practice of Medicine*, mentions that "Pressure on veins causing engorgement, particularly of the head and arms, sometimes is relieved promptly by free venesection, and, at any time in attacks of dyspnea with lividity, bleeding may be done with great benefit."

Paul White<sup>7</sup> in his textbook, *Heart Disease*, makes no mention of venesection for aneurysm. All of these authors mention the fact that bed rest, restricted diet, and judicious antiluetic treatment are valuable in the management of patients suffering from aneurysm.

#### Case Report

F G, an Italian male 57 years of age, sought medical attention on October 8, 1937, because of the presence of swelling in the upper chest, cough, and palpitation. These symptoms were first noticed during the summer of 1932, and became pronounced during the summer of 1936. The family history was irrelevant and the past history disclosed the fact that the patient had indulged in many heavy weight-lifting feats. Luetic infection was denied.

Examination revealed a short, stocky, well-nourished very muscular adult male with a very good hemic component. A pulsating bilobular mass approximately 9 cm in diameter and 6 cm deep was present just below the supra-sternal notch. The overlying skin was thin and discolored. This mass pulsated forcefully and rupture seemed imminent and unavoidable. Around its base a systolic murmur was heard. The left border of the heart was 11 cm in the fifth left interspace and right border 3 cm in the fourth right interspace. At the apex the first

ceived high voltage x-ray cycle to two abdominal ports 150 r daily alternating until a total dose of 2,100 r by 2 had been administered. She also received two transfusions of unmodified blood, 300 cc each. The slides previously made by Dr. Price were reviewed by Dr. James Ewing who concurred in the diagnosis of gelatinous carcinoma of intestinal origin.

A barium enema revealed complete obstruction at the upper end of the descending colon. A thin water barium mixture was injected retrograde through the colostomy, and there seemed to be a narrowing of the splenic flexure of the colon with, apparently, a complete obstruction of the upper descending colon.

The patient was discharged on February 20 as unimproved but returned to the clinic for follow-up. She continued to have considerable abdominal pain and discomfort after eating and continued to lose weight. On April 20, 700 cc of blood-tinged fluid was withdrawn from the abdomen. Later examination revealed a large mass in the lower right abdomen, one above the pubis, and a third, close to the opening of the colostomy. The liver was enlarged. The patient continued to lose weight and died at home on May 24, 1938. Postmortem examination was not made.

### Discussion

Carcinoma of the colon occurring at this age is extremely rare. Pack and LeFevre<sup>1</sup> in review-

ing 16,565 cases of malignant diseases admitted to Memorial Hospital from January 1, 1917, to January 1, 1929, found 107 cases of carcinoma of the colon, the youngest patient 23 years old. Wainwright<sup>2</sup> in 1925 reported the case of a girl of 11 years and, in an extensive search of the literature, found only 6 cases of carcinoma above the sigmoid in patients under 16 years of age. Warthin,<sup>3</sup> in 2,000 autopsies on patients with malignant disease, found 195 cases under 30 years of age but only 2 of them involved the colon. The ages were 18 and 24. Miller,<sup>4</sup> reporting 129 cases of carcinoma of the colon found only one patient 17 years of age. Plehn<sup>5</sup> observed a case of carcinoma of the cecum in a girl of 9 years, confirmed by roentgen ray operative, and histologic findings. Carcinoma of other abdominal viscera occurs much more frequently and at an earlier age than carcinoma of the colon.

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## ANEURYSM OF THE AORTA

### Report of a Case with Apparent Complete Recession

EUGENE R. MARZULLO, M.D., Brooklyn, New York

(From the Department of Medicine, Long Island College Hospital, Brooklyn)

THIS case of aneurysm of the aorta is reported because of its apparent complete recession. Interest may be accentuated by the fact that, venesection, a part of the treatment used, was a well-recognized method of treatment in the eighteenth century. The combination of rest, low diet, and frequent bleedings was known as the Valsalva method of treatment of aneurysm. Morgagni<sup>1</sup> described it as follows: "When as much blood as was requisite was withdrawn (by repeated bleedings), he (Valsalva) ordered a progressive diminution of food and drink until the quantity was reduced to a determined weight of ailment and water. Having so enfeebled the patient that he could scarcely raise his head from bed, on which he was ordered to lie from the beginning, the quantity of ailment was cautiously increased." This procedure was the popular method of treatment for aneurysm in the eighteenth century and it continued to enjoy popularity throughout the greater part of the nineteenth century. In 1848, Dr. Thomas

Watson, in his book, *Lectures on the Principles and Practice of Physic*, and in 1884, Austin Flint in *Flint's Practice of Medicine*, described it and commented favorably upon its value. In the latter part of the nineteenth century, however, this method gained disrepute. It became unpopular because it was considered drastic and in some instances more intolerable than the aneurysm. Sudden death from rupture of the aneurysm or from a complication such as heart failure in the course of treatment utilizing venesection was the probable final cause for its renunciation and abandonment. But again in 1908, Osler<sup>2</sup> in *Osler's Modern Medicine*, spoke highly of venesection for aneurysm. He mentions the fact that cures have been reported in the literature and that healing takes place by one of two methods, connective tissue formation and thrombosis. He states: "The second great element in the repair of an aneurysm is thrombosis, the deposit of laminated fibrin in the sac. We are as yet ignorant of the precise conditions

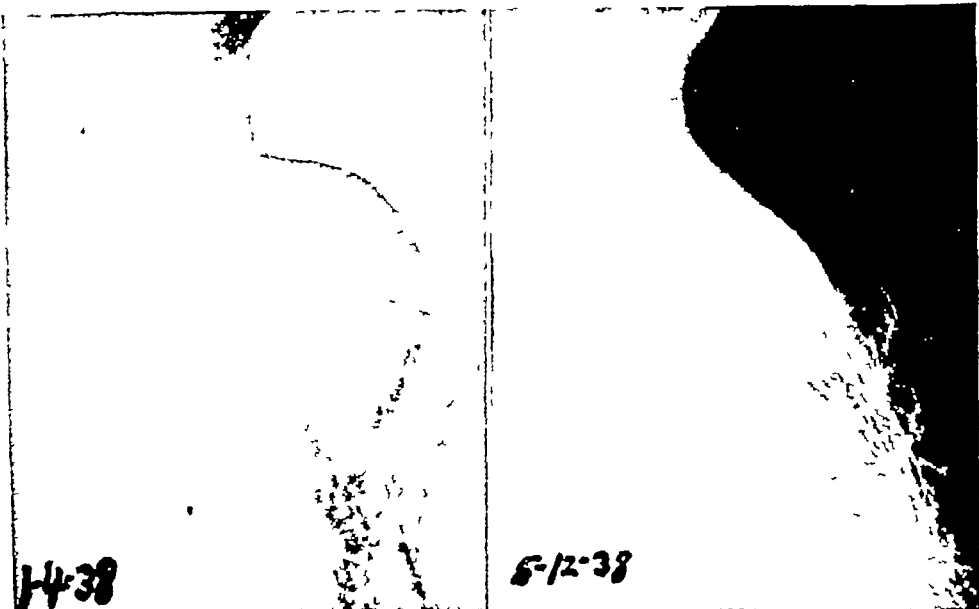


FIG 1

under which this process takes place. It does not occur in every case, even under conditions which look the most favorable. The laminations (in healing) may be in some way due to a successive deposition. Gradually the aneurysm may become filled even to the mouth and in this way permanent healing may be affected."

The outlook is certainly always grave in a fully developed aneurysm of the aorta and any form of medical treatment that may retard its progress and possibly lead to a cure is noteworthy. It is surprising, however, that the current modern textbooks on medicine either fail to mention venesection for aneurysm or do so only to point out its limitations.

Edgar V. Allen<sup>3</sup> in *Musser's Internal Medicine*, states "There is no known medical treatment for aneurysm, except restricted activity and prescribing of a diet low in calories, in an attempt to reduce arterial pressure." Meakins<sup>4</sup> in his textbook *Practice of Medicine*, states "The second line of attack is the hope of preventing the local tumor from further enlarging, and at the same time promote local thrombosis. The essentials of this treatment are rest and a concentrated diet." He does not mention venesection.

Malcolm Goodridge<sup>5</sup> in *Cecil's Textbook of Medicine*, states "The various measures to increase the coagulability of the blood, which have been suggested, such as frequent small bleedings—are of little value."

Henry A. Christian<sup>6</sup> in *Osler's Principles and Practice of Medicine*, mentions that "Pressure on veins causing engorgement, particularly of the head and arms, sometimes is relieved promptly by free venesection, and, at any time in attacks of dyspnea with lividity, bleeding may be done with great benefit."

Paul White<sup>7</sup> in his textbook, *Heart Disease*, makes no mention of venesection for aneurysm. All of these authors mention the fact that bed rest, restricted diet, and judicious antiluetic treatment are valuable in the management of patients suffering from aneurysm.

#### Case Report

F. G., an Italian male 57 years of age, sought medical attention on October 8, 1937, because of the presence of swelling in the upper chest, cough, and palpitation. These symptoms were first noticed during the summer of 1932, and became pronounced during the summer of 1936. The family history was irrelevant and the past history disclosed the fact that the patient had indulged in many heavy weight-lifting feats. Luetic infection was denied.

Examination revealed a short, stocky, well-nourished, very muscular adult male with a very good hemic component. A pulsating bilobular mass approximately 9 cm in diameter and 6 cm deep was present just below the supra-sternal notch. The overlying skin was thin and discolored. This mass pulsed forcefully and rupture seemed imminent and unavoidable. Around its base a systolic murmur was heard. The left border of the heart was 11 cm in the fifth left interspace and right border 3 cm in the fourth right interspace. At the apex the first



FIG 2



FIG 3

sound was short and faint. There were no murmurs at the apex. The second sound at the base was audible. The lungs were clear. The liver and spleen were not palpable and the lower extremities showed no edema.

The blood pressure, right arm was 90/58 and the left arm 120/70.

The blood Wassermann and the spinal fluid Wassermann were negative.

The urine was essentially normal as was also the blood chemistry.

Fluoroscopic and x-ray examination of the chest on October 27, 1937, revealed a moderately large aneurysm of the ascending portion of the aortic arch.

#### Comment

The Valsalva method of treatment for aneurysm, referred to before, was undoubtedly applicable to aneurysm the result of syphilis. In this reported case the aneurysm involved the arch of the aorta and as such its etiology was considered to be luetic in spite of repeatedly negative serology. Antiluetic treatment was not instituted.

The aneurysm had eroded the manubrium. Its external pulsation was so forceful that rupture seemed imminent and venesection was performed to avoid its occurrence. Immediate and striking relief resulted and I was encouraged to repeat it in an effort to establish a cure by thrombosis, because I have observed, that after an acute loss of blood there sometimes occurs a marked increase in the blood platelets and a diminution in the bleeding time and clotting time.

Venesection and phenylhydrazine were primarily used in order to produce anemia so as to diminish the total blood volume, it having been reported by Rowntree, Brown, and Roth<sup>4</sup> that the mean total blood volume in secondary anemia was as low as 33 per cent less than the mean for normal persons.

The patient was kept in bed for a month on a diet low in calories. The chart on treatment reveals that venesection, 500 cc at a time, was done over a period of two months. It is to be noted (see chart) that with this treatment there was a reduction in the blood count, the bleeding time was reduced to fifteen seconds, the clotting time to one minute, and the blood platelets increased to 680,000 per cm.

Clinically, the first symptom to improve and disappear was the abnormal pulsation. The cough and the hoarseness improved and disappeared within the first two weeks of treatment. The aneurysm became reduced in size appreciably, in less than three weeks after five venesections of 500 cc. of blood each. It disappeared entirely at the end of seven months.

As time went on the patient was followed by fluoroscopic examination and when no further abnormal pulsation of the aorta was apparent, the blood count was allowed to return to normal. At present the patient has no symptoms and he is pursuing normal activities with no evidence of aneurysm by fluoroscopic examination.

In the patient referred to in this report, the

Date	R.B.C.	Hbo.	B.T.	C.T.	Pl.	Treatment	Aneurysm
10/8/37	5.3	15	2 min.	5 min.	2.8	Bed Rest	8.2 cm.
10/10/37						phl.500 c.c.	
10/15/37			2 min.	4 min.	2.8	phl.500 c.c.	
10/18/37	4.2	12	30 sec.	2 min.	4.5	phl.500 c.c.	8.4 cm.
10/22/37						phl.500 c.c.	
10/26/37	3.5	11	15 sec.	1 min.	8.6	phl.500 c.c.	
11/1/37	3.0	10				phl.500 c.c.	5.2 cm.
12/2/37	3.4	10			3.5	phl.500 c.c.	
1/2/38						P.Hcl.1 gr.t.i.d.	
2/5/38	2.5	7				P.Hcl.1 gr.b.i.d.	5. cm.
3/8/38						P.Hcl.1 gr.b.i.d.	
4/2/38	2.2.	7				No Medication	
5/5/38	3.2	9				P.Hcl.1/2 gr.b.i.d.	not visible
6/5/38						No Medication	
7/8/38	3.8	11.4				P.Hcl.1/2 gr.b.i.d.	
8/10/38	3.0	9.0				P.Hcl.1/2 gr.b.i.d.	
9/2/38						P.Hcl.1/2 gr.daily	
10/5/38	4.0	12				No Medication	
11/5/38						No Medication	
12/10/38	5.2	14.4	2 min.	5 min.	2.	No Medication	

R.B.C. in millions. Hbo. in grams. B.T. = Bleeding Time. C.T. = Clotting Time  
 Pl. = Platelets in 100,000. Phl. = Phlebotomy. P.Hcl. = Phenylhydrazine Hydrochloride. Aneurysm = Size scale 1:4

diminished blood volume, the diminished clotting time, and the high platelet count were conducive to healing of the aneurysm by the deposition of fibrin and by thrombosis in the aneurysmal sac

#### Conclusion

1 A case of aneurysm of the aorta with apparent cure is reported

2 Bed rest, regulated diet, venesection, and phenylhydrazine therapy are advocated for the treatment of aneurysm.

3 The literature on venesection for aneurysm is reviewed

#### References

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- 4 Meakins J C. Practice of Medicine 426 (1936) C V Mosby & Co. St. Louis.
- 5 Goodridge Malcolm Russell Text of Medicine 1152 (1937) W B Saunders & Co. Philadelphia.
- 6 Christian H A. Osler's Principles and Practice of Medicine 13th Ed., 1080 (1938)
- 7 White, P D Heart Disease, 508 (1937)
- 8 Rowntree, L G Brown G E Roth, Grace M. The Volume of the Blood and Plasma in Health and Disease, W B Saunders & Co 1929

An upstate paper tells us that the local health officer gave a talk at the high school on "Milk Barn Diseases" Not far wrong, either

"How many students are there at the medical college?"

"Oh, about one in ten"—*Medical World*

# Legislative News

## Bulletin No 3

(January 24, 1940)

### New Bills Introduced

**SENATE INT 475—Ryan, Assembly Int 466**—Devany, creates a temporary commission to study and recommend measures for improving facilities and care of youth and appropriates \$10,000. Referred to the Finance Committee in the Senate and the Ways and Means Committee in the Assembly.

**COMMENT** Mr Ryan proposes the creation of a temporary State commission consisting of five members appointed by the Governor and five legislators, in addition to the Commissioners of Health, Education, Agriculture, Correction, Mental Hygiene, Labor, and Social Welfare, for the purpose of studying all State, Federal, and local laws relating to youth and to make recommendations and propose such legislation as it may deem proper, with special reference to unemployment, relief, health, guidance, education, leisure time activities, and crime prevention aids.

**Senate Int 484—Wicks**, permits counties and cities to establish cancer clinics, the State to grant a sum not exceeding one-half the actual cost of maintenance not in excess of \$7,500 a year for each clinic and \$5,000 toward installation and equipment. Referred to the Health Committee.

**COMMENT** Senator Wicks informs us that he introduced this bill after discussing with physicians in his county—Ulster—the means and methods available to them for early diagnosis and treatment.

**Senate Int 508—Desmond, Assembly Int 695—Vincent**, defines the practice of radiology as practice by any person making examinations of the human body by use of x-rays or by means of fluoroscopic exhibition or by shadows registered with photographic material and use of x-rays, except one employed under supervision of another who is duly qualified to practice medicine, purpose being to prohibit such practice by any person other than one licensed to practice medicine, dentistry, or chiropody. Referred to the Education Committees.

**COMMENT** This bill has been prepared by the radiologists and we are informed it does not contain the objectionable features of similar bills that were defeated last year. It specifically and rightly provides that radiology shall be a part of the practice of medicine and its practice regulated under the medical law.

**Senate Int 510—Feinberg, Assembly Int 476—Steingut**, makes mandatory, instead of permissive, the licensing by Industrial Commissioner of workmen's compensation medical bureaus and laboratories upon recommendation of County Medical Society, and provides that bureaus may be supervised as well as operated by qualified physicians, medical bureau may appeal to Industrial Commissioner if County Society or board fails to recommend establishment of such bureau or laboratory. Referred to the Labor Committees.

**Assembly Int 461—Austin**, requires New York City Education Board to establish child guidance bureau with staff of psychiatrists, psychologists,

and social workers, diagnosis and treatment of child are not to be provided if parent or guardian objects. Referred to the Education Committee.

**Assembly Int 469—Goldstein**, establishes a state-wide plan of public medicine and reorganizes the Health Department, establishes therein four new divisions, medical, dental, nursing care, and pharmacy, with jurisdiction over health functions of various departments and other activities relative thereto, makes salary of Commissioner \$15,000, provides for three deputies at \$12,000, and appropriates \$500,000. Referred to the Ways and Means Committee.

**COMMENT** Mr Goldstein had this bill before the Legislature last year. Its principal feature is that it would collect all activities that relate to health and the practice of medicine from the various State Departments, as Education, Labor, Agriculture, etc., and combine them under the Commissioner of Health.

**Assembly Int 470—Goldstein**, permits the State to operate and conduct lotteries, net proceeds of which shall be devoted to carrying out long-range health program to safeguard health of people and distribute public medicines. Referred to the Judiciary Committee and by it to the Attorney General for opinion.

**Assembly Int 477—Vincent**, permits sale of narcotic drugs by certain physicians or surgeons. Referred to the Health Committee.

**COMMENT** Same as Senate Int 240—Young, reported in Bulletin No 2.

**Assembly Int 499—Gans**, relative to reports of physicians in workmen's compensation cases. Referred to the Labor Committee.

**COMMENT** Same as Senate Int 314—Condon, reported in Bulletin No 2.

**Assembly Int 619—Peterson**, requires a peace officer, on arrest, to take before a physician designated by a Medical Society, for examination, a motor vehicle or cycle operator whom the officer believes to be intoxicated. Referred to the Motor Vehicles Committee.

**COMMENT** Mr Peterson has had this bill before the Legislature the last two years and we supported it in principle. Some question was raised as to whether the tests suggested in the bill are adequate and whether a physician would have a legal right to perform them.

**Assembly Int 646—Dollinger**, provides for care and assistance by city and county welfare districts to needy tuberculous persons and their dependents, reimbursement therefor to be made by the State Social Welfare Department in whole or in part, persons receiving such aid cannot receive old-age assistance or dependent child aid. Referred to the Relief and Welfare Committee.

**COMMENT** In this bill the definition of "tuberculous" is "A person shall be considered tuberculous who has undergone treatment for tuberculosis and has not been an apparently arrested case for five consecutive years. Classification of the tuberculous condition within the provisions of this definition shall be determined

according to standards adopted by the State Department of Health " A person who may be eligible for financial assistance "(1) Is tuberculous as defined above, (2) Has resided in the State for at least one year immediately preceding the institution of treatment for tuberculosis either as a new or relapsed case, (3) Has not sufficient income or other resources to provide a reasonable subsistence compatible with decency and health, and has no children or other person able to support him and responsible under the provisions of this chapter for his support, (4) Has not declined to accept employment under reasonable conditions or to receive training medical care, or other assistance which might reasonably be expected to improve his condition, (5) Is not an inmate of any public institution or of any private institution to which an admission fee has been paid or transfer of property has been made, (6) Has not made a voluntary assignment or transfer of property for the purpose of qualifying for such assistance, (7) Is not, because of his physical or mental condition, in need of continued institutional care " The assistance may be provided "in the person's own home or room " Temporary care in a hospital or sanitarium may be provided with the approval of the State De-

partment. Under rules and regulations to be established by the State Department, assistance may be granted to eligible applicants who are receiving training or education or who are waiting for employment The amount and nature of the assistance to be granted and the manner of providing it shall be determined by the public welfare officer The cost of furnishing such assistance is to be borne by the public welfare districts subject to reimbursement by the State to the extent of one-half

#### Action on Bills

S Int 97—Graves	Adulterated foods	Passed Senate
A Int 24—Mailler	Health Commission, additional member	Chapter 1
A Int 79—Allen	Adulterated foods	3rd reading
A Int. 150—Goldstein	Hospital records, inspect	3rd reading

JOHN L BAUER, LEO F SIMPSON, WALTER W MOTT

*Committee on Legislation*  
JOSEPH S LAWRENCE, *Executive Officer*

## Bulletin No 4

(January 31, 1940)

### Bills Introduced

**SENATE INT 599**—Condon, Assembly Int. 833—Armstrong, provides that the amount of the fee which an employer or carrier must pay a physician of injured employee in a workmen's compensation case shall be fixed by the industrial board instead of the commissioner Referred to the Labor Committees

**COMMENT** This amendment has been recommended by the Department of Labor and approved by our Committee on Workmen's Compensation.

**Senate Int. 709**—Condon, includes in workmen's compensation coverage any incorporated volunteer fire companies rendering fire protection service on contract basis, who elect to be so covered by resolution of board of directors or trustees after notice to members Referred to the Labor Committee.

**COMMENT** Reported as a matter of information.

**Senate Int. 765**—Gutman, authorizes education boards to employ psychologists, visiting teachers, and social workers with training in psychiatric social service. Referred to the Education Committee.

**COMMENT** Adds to the Education Law which provides for the employment of medical inspectors that boards may employ psychologists and visiting teachers or social workers with training in psychiatric social service. Mr Gutman, when an Assemblyman last year, had this bill before the Assembly It was never reported out by the Education Committee and was disapproved by us

**Senate Int. 792**—Page, Assembly Int. 878—Todd, provides that after July 1, 1941, instead of 1940, it shall be unlawful to practice nursing without being duly licensed and registered. Referred to the Education Committees

**COMMENT** The Department of Education reports that it will not be able to examine and license all nurses who are applying under the new law by July 1, 1940, as the law requires, therefore this petition for extension of a year

**Assembly Int. 981**—Peterson, provides for the regulation of the practice of chiropractic under supervision of the Education Department. Referred to the Education Committee.

**COMMENT** This bill is almost identical with the one carried by Mr Peterson in 1936, 1938, and 1939 It provides for a special examining board of five members, appointed by the Regents, composed of chiropractors who shall have one of the three qualifications—either a graduate of a four-year-school course and three years of practice, of a three-year-school course and ten years of practice, or a two-year-school course and fifteen years of practice in this state. *No provision is made for examining or licensing members of the board,* and since no chiropractors have been licensed in this state, it is to be assumed that the members of the board would be licensed by waiver The board shall have charge of preparation and grading of examination papers and shall license to practice any person who shall pass a *special examination* in the principles and practice of chiropractic and is (a) a graduate after resident course of twenty-four months in a school or college teaching chiropractic and shall have been practicing chiropractic in this state for six months, (b) a graduate after a resident course of eighteen months in a school or college teaching chiropractic and shall have been engaged in the practice of chiropractic for three years in this state, (c) after a resident course of twelve months and ten years of practice in this state.

The schools referred to above must be schools



or colleges of chiropractic acceptable to the board (of chiropractors, not Board of Regents) and the course of study include the subjects of anatomy, physiology, symptomatology, hygiene and public health, and the principles of chiropractic. The Department of Education has approved of no school or college of chiropractic.

If the *chiropractic board approve*, the Department of Education may waive the examination of an applicant for license who has been duly licensed or registered as a practitioner of chiropractic in any other state of the United States having registration or license requirements equal to those provided in this article.

For the future the applicants for examination must be graduates of a high school (after 1943 one year's college study may be required) and subsequently must graduate from a school or college teaching chiropractic which possesses apparatus, equipment, and resources of at least \$50,000 and six full-time instructors. The course of instruction shall cover four school years of not less than eight months each including biology, anatomy, histology, and embryology, hygiene and public health, bacteriology, physiology, biological chemistry, including dietetics, symptomatology, pathology, chiropractic analysis, x-ray as it relates to chiropractic analysis, and the principles and practices of chiropractic.

Some of our objections to the bill are (1) no provision is made for the licensure by examination of chiropractors to be appointed to the board, (2) no separate examining board is justified, (3) educational requirements are reduced in that preliminary education requires only a high-school course, while physicians and osteopaths are required to offer a high-school course and, in addition, a two-year pre-medical college course, (4) under the waiver provisions it would be easy for every person practicing chiropractic in the state today to secure a license, in spite of the fact that they do not have the basic educational qualifications.

If this bill were to be enacted into law the state would betray the trust the public has reposed in it for the licensure of adequately-trained persons for the care of the sick.

Assembly Int 1005—Wagner, creates in the Health Department a consumers' bureau for registration advertising control, analysis, scientific research, education, publicity and regulation of manufacture and sale of drugs, cosmetics, or health devices to prevent adulteration or misrepresentation. Referred to the Ways and Means Committee.

COMMENT Mr Wagner sponsored this bill last year.

### Resolutions Introduced

By Mr Ives That at 12 o'clock noon, February 6, the Assembly nominate a candidate for the office of Regent in place of Grant C Madill, M D Ogdensburg, whose term is to expire. Adopted.

By Mr Ives That the Senate and Assembly meet in joint session at 12 o'clock noon, February 7, for the purpose of comparing nominations for the office of Regent in place of Grant C Madill, M D, whose term is to expire. Adopted in both Houses.

### Action on Bills

S Int 258—	Physically - handi	
Hastings	capped children	Reported
S Int 599—	Workmen's compen	
Condon	sation physicians'	
	fees	3rd reading

Senate Int 355—Gutman, Assembly Int 241—Wagner, reported in Bulletin No 2. Mr Wagner informs us that the object of this bill is to make legal the provisionally-created division of industrial hygiene now existing in the Department of Labor.

The comment in Bulletin No 3 on Senate Int 510—Feinberg, Assembly Int 476—Stengul, relating to medical bureaus and laboratories, was incorrect and should have stated that the bill is *disapproved* by the Committee on Workmen's Compensation.

JOHN L BAUER  
LEO F SIMPSON  
WALTER W MOTT  
*Committee on Legislation*  
JOSEPH S LAWRENCE  
*Executive Officer*

### STORAGE OF BLOOD FOR TRANSFUSIONS SHOULD BE LIMITED TO TEN DAYS

A limit of between five and ten days for the use of blood for transfusion after it has been stored appears to be a safe restriction, due to the less satisfactory or even dangerous results which may follow the use of older blood, the *Journal of the American Medical Association* recommends in an editorial.

"The obvious advantages of storing blood for transfusion have led to the adoption of 'blood banks' by many large hospitals throughout the country," the editorial points out. "With regard to results of transfusion, it has been found that there is no difference in the incidence of untoward reactions provided the blood has not been kept too long.

"Investigations indicate that blood more than from a week to ten days old is not equivalent to fresh blood. Indeed, with blood that is too old

there is even some danger of blood in the urine and serious symptoms such as are known to result from the transfusion of incompatible blood.

"When the available data are taken into consideration, it is evident that the transfusion of preserved blood has acquired an important role. This is a great change in attitude from the opinion held less than two decades ago, when the transfusion of citrated blood even when fresh was looked at askance. However, there are definite limitations to the use of stored blood which should be taken into account. Pending further investigation, a safe limit to set for the use of such blood would be between five and ten days. Perhaps by improving the method of storing blood it may be possible to extend the time limit."

# Medical News

## The American Health Program\*

NATHAN B VAN ETEN, M D

*President-elect, American Medical Association*

**A**CTING under the authority of the House of Delegates at the St Louis session, the Trustees recently wrote a new eight-point platform upon which American Medicine stands for objective realization of the desires of 116,000 physicians

### Platform of the American Medical Association

The American Medical Association advocates

1 The establishment of an agency of federal government under which shall be coordinated and administered all medical and health functions of the federal government exclusive of those of the Army and Navy

2 The allotment of such funds as the Congress may make available to any state in actual need for the prevention of disease, the promotion of health, and the care of the sick on proof of such need.

3 The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility

4 The development of a mechanism for meeting the needs of expansion of preventive medical services with local determination of needs and local control of administration.

5 The extension of medical care for the indigent and the medically indigent with local determination of needs and local control of administration.

6 In the extension of medical services to all the people, the utmost utilization of qualified medical and hospital facilities already established

7 The continued development of the private practice of medicine, subject to such changes as may be necessary to maintain the quality of medical services and to increase their availability

8 Expansion of public health and medical services consistent with the American system of democracy

The essentials of this new platform of the American Medical Association are coordination of government health functions, governmental provision of funds for disease prevention and relief of uncared for sickness on proof of need, development of local responsibility for local demand and local control of administration, and encouragement of the private practice of medicine as far as possible in harmony with maintenance of a good quality of medical care.

In 1875 the American Medical Association asked for a Secretary of Health in the Cabinet of the President and has timidly restated its desire at various sessions of the House of Delegates—after which the delegates went home to practice medicine and forgot about it. If physicians really want a national health department they must step down from their dignified pedes-

tals and fight for it with weapons which legislators understand. These weapons are the votes of local electorates

The medical profession has been reviled as static, reactionary, and selfish. Of course, these accusations are untrue, but they will have wide belief unless physicians will realize the necessity of asserting themselves in their home localities and demand local support for their ideals

It is a serious reflection upon the virility of the medical profession that it seems to be necessary for political theorists to propagandize regimentation of medical service in order to arouse the physicians of this country to action

Coordination of all federal health agencies except those of the Army and Navy seems a logical thing to do. The health of our people should be the honest concern of the chief executive. And the health authority should be a member of his Cabinet

I would like to see a new national department to be known as the Department of Health headed by a secretary who must have had a medical education and be licensed to practice medicine. I would like this new department to include the following bureaus

1 Public health

2 Infancy and maternal welfare to be transferred from the Department of Labor

3 Rehabilitation of veterans

4 Research.

5 Licensure

6 Care of indigents

7 And other divisions to care for all other health responsibilities, fusing all departments into one less expensive to operate and eliminating the confusion of overlapping and duplication.

I believe the President should have the benefit of scientific advice in health and hygiene within his official family

The Declaration of Independence provided for governmental protection of life, liberty, and the pursuit of happiness. Jefferson must have thought of the health of the people as a concern of government

Owen D Young's group has recently called upon the government to take an active interest in the health of youth.

Defense against disease is quite as important as defense against the ideas and domination of foreign enemies

It seems to me to be timely to drop complicated and slipshod methods and attack the problem courageously and efficiently

Infancy and maternal welfare developed in the Department of Labor in response to a wide outcry against child labor. Its objective has been largely realized and now requires a wider and more general type of direction.

Rehabilitation of veterans, developed with well-known administration scandal, under a stimulated emotional campaign is now well es-

\* Delivered before the Medical Society of the County of Queens January 30 1940

tablished—hospitals are widespread and may well have a broader significance with the passing of time under a Department of Health.

Appropriations for research are now vested in the bureaus of Public Health and in appointed committees. I believe that the value of such work would be greatly enhanced if these studies were coordinated in a Department of Health, where voluntary agencies, such as medical schools, voluntary hospitals, and philanthropic foundations could cooperate in directly helpful service for the information of the government.

The National Board of Medical Examiners could very well fit into a function of a national health department.

Medical care of indigency looms as one of the most important functions of government. A concert between local agencies through some new type of local, state, and national machinery could well be headed in a national health department.

The migrating indigent is one of those for whom no local agency is willing to assume the responsibility. They are pushed from state to state and travel from one seasonal employment to another.

No health insurance scheme can take care of such people who can make no regular contribution to any compulsory or government financing. Their care must be centralized. Would there be a better place for this work than in a national health department?

It would seem to be ideal to choose a career man to head this department. Some one who has been developed through the present department of Public Health or through service in some of the state administrations.

Examination of the current personnel in the various states shows a real need for more competent health officers.

Service in the various fields of public health should be carried on by career persons who should be developed through special postgraduate training beyond the ordinary undergraduate course in medicine.

Although it must always be borne in mind that a period of private practice seems to be necessary for understanding intimate personal medical problems, there is reason to feel that those who are to direct public health administration should be specially trained in the science of administration before entering such a field. Too often the health officer is merely a political appointee because he has influential friends rather than because he knows anything about the duties of the office. He should also be made conscious of the fact that he is only an administrator and not a practitioner of medicine.

The public consequence of private practice may need government umpiring, but government participation in private practice must not be tolerated.

I believe that the Secretary of Health should be a physician who has had enough experience in the practice of medicine to know the point of view of the patient as well as that of the physician.

He should not be a political theorist who can not know medical care of the sick because he has never practiced it.

There is evidence of a concerted drive for a general service to the sick, both preventive and curative, supported by taxation and under government control.

There is frequent reiteration of a desire for free medical care, patterned after free public education—all doctors salaried by the state—a complete system for state medicine. There seems to be no limit to the belief that the public purse will be able to pay for it, even in the presence of evidence that state education is already too costly for the public pocket. This belief continues regardless of the fact that school budgets are now the subject of acrimonious debate and regardless of the mounting national deficit.

In the State of New York last year state education absorbed 45 per cent of the state budget of \$385,000,000. State education takes care of people from the ages five to twenty-one only, while state medicine would involve the care of people from before birth to interment.

Prohibitive cost means nothing to some political theorists.

A new program must provide something better and simpler than these excursions into Utopia.

Unless we are ready to accept complete totalitarianism I believe that an American Health Program should operate from the periphery toward the center.

I believe that needs for help should be discovered in the smallest political subdivision such as the school district, then referred to the town ship, the county, the state, the federal authority in that order, and that the federal authority should be called upon as infrequently as possible.

I believe that medical service to the economic indigent is the problem of the taxpayer. The economic indigent may be defined as one who is unable to provide the necessities of life for himself and his family.

I believe that medical service to the medical indigent is the problem of the taxpayer. The medical indigent may be defined as one who cannot pay for medical care without sacrificing the necessities of life for himself and his family.

I believe that medical service to these two classes of people should be administered by the medical profession and that the physicians who do this work should be paid by the taxpayer.

I believe that medical service to other people of low income who are able to pay for ordinary but not for catastrophic illnesses should be shared by the medical profession and the taxpayer. The medical profession and the taxpayer should provide such needed medical service in tax-supported institutions either free or at minimum rates.

I believe that new mechanisms for caring for the health needs of the people involving all political subdivisions from the locality to the federal government should be developed no faster than administrative personnel can be sufficiently trained to be effective.

I believe that preventive medicine although largely a public health problem involving the control of communicable disease should be promoted by all practicing physicians upon whom should be imposed definite civic responsibility.

I believe that every effort should be made to provide for the average man so that he can prepare for emergencies without throwing himself upon the sources of charity.

I believe that budgeting for sickness through insurance providing cash indemnity should be encouraged—as well as insurance against the cost of hospitalization but that these two forms of insurance should be separate projects.

Compulsory systems of sickness insurance as now operating do not take care of indigents and are only interested in workers who pay for insurance of this type through payroll deductions.

I believe that the sentiments of groups of religionists who object to compulsory medical care through insurance or otherwise should be respected so long as their beliefs do not jeopardize the public health through neglect of ordinary health precautions for themselves or the community.

Neither creed nor race nor color should deprive any American of the benefits of the best of clinical medicine, but the manner of its delivery should evolve from simple formulae. The formulae should grow from the needs of the people as recognized by the family physician, the public health nurse, and local welfare workers.

The formulae should grow into workable being in an orderly way. This requires a period of time, for short steps before long strides must be taken. Much laboratory work must be done, as recognized by the President in his recent proposal to build small hospitals in regions where they are needed. This proposal is in harmony with the new platform of the American Medical Association.

It is a sane alternative to the extravagances of the proposed Wagner Health Act. It is a stimulant to local initiative to operate a facility erected by the government for the benefit of the locality.

It is also in harmony with the President's private statement on more than one occasion that he is opposed to any extensions of state medicine that can be avoided.

It is an immediate forward step toward correcting faulty distribution of medical facilities and may prove as attractive as are many hospitals to young physicians who may be seeking new locations.

The memory of an internship in a hospital furnishing every convenient facility is often disturbing to a young doctor's response to calls to country practices where he must be self-dependent.

It is to be hoped that these new hospitals will be placed in response to well-established local needs.

At the invitation of the President, committees from the American Hospital Association, from the Catholic Hospital Association, from the Protestant Hospital Association, and from the American Medical Association met the President at the White House early in January.

The committee reports that the President seems to be opposed to the enactment of the Wagner bill and apparently intends to propose to Congress that a sum approximating \$10,000,000 be appropriated for the purpose of building small hospitals in places where there appears to be great need of hospital facilities. This project was subsequently embodied in the President's message to Congress on January 30. Under the plan proposed, the federal government will build the hospitals, but the community, with or without state aid, will be required to maintain these institutions. The President stated that such hospitals when built will not be placed in undue competition with other hospitals. There was little discussion of details at the conference, though some felt that there should have been more such discussion since the practicalities of the situation seemed to demand it.

Following a discussion participated in by the committee representing the American, the Catholic, and the Protestant hospital associations and the American Medical Association, the following points were left with the President as representing their joint conclusions:

- 1 Hospitals to be built only where need can be shown. Advisory consultation in the determination of such need to be given by the state medical and hospital associations, the state health department and the county judges or officials of the counties in which such hospital services are proposed.

- 2 Size of hospital to be commensurate with the needs of the community and the ability of the latter to support it.

- 3 Means for the maintenance and upkeep of such hospitals rank in importance equal to that of construction.

- 4 Since the important objective of the program is the service it can render, hospital construction and administration, equipment, staff, and personnel should meet the standards which the American Medical Association, the American College of Surgeons, and the Hospital Associations regard as minimal for rendering such service in the various localities. Where needed, since highly specialized facilities and personnel cannot be made available in all places, affiliation with larger hospitals or hospital centers to be had to the end that highly specialized services, diagnostic and therapeutic, be made available to all.

- 5 Maintenance of a standard of professional and hospital service that will keep it efficient and prove attractive to qualified men and women as a career.

- 6 Utilization of existing facilities where possible. Under no circumstances should the program be allowed to develop into competition with the voluntary hospitals, but should rather foster cooperation between the two groups.

- 7 Many small communities can be better served by the utilization of bed vacancies in available existing institutions than by the construction of new hospitals, transportation, and per diem expense to be borne by federal, state, and/or county funds. Where state and/or county funds cannot be provided, such expense to be met by federal grants-in-aid to, and to be dispensed by, local agencies.

Ambulance service and good roads will permit this type of service to operate safely, efficiently, and economically in communities not financially able to support a hospital.

The President's proposal should have the hearty support of all physicians and public health workers. The President inspires us to travel the road to the future. His action indicates a belief that it is untimely that radical changes in national medical care should be precipitated while catastrophic clouds hang over our own nation and while the map of the world is being remade and a peaceful federation of nations seems impossible.

Although many of us were officers in the war twenty years ago, and some of us are now reserve officers, and all of us desire peace more than anything else, we are ready to take our places in support of the nation if the real emergency arises.

Supporting this sentiment the American Medical Association has already offered all of its or-

ganizational resources to the government and is ready to cooperate to the limit of its ability.

The American Health Program has been writing itself for one hundred and eighty-eight years since Benjamin Franklin opened the first hospital in America in 1752.

The American Medical Association has been motorizing this program for the last ninety-four

years cherishing an ambition not only to conserve all of the verities and values of this medical service evolution, but the projection of them into new objectives for the delivery of better and better medical services to the American people.

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Approval of licenses has been held up principally for three reasons: (1) the lack of budgetary appropriation until May, 1939—a ten-

month period during which the work piled up because the regular staff could not be augmented, (2) the delay on the part of applicants and the schools from which they graduated in sending necessary records to complete the applications, and (3) the regulation which requires that stenographic helpers appointed from the temporary list of Civil Service workers must be changed frequently.

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"We will comply with the insurance department's revised rate of schedule of maximum income for participants—\$1,800 for an individual, \$2,500 for husband and wife, and \$3,000 for a family," he said.

The plan will be operated in Erie, Genesee, Niagara, Chautauque, Cattaraugus, Wyoming, Orleans, and Allegany counties. Dr. Critchlow said 500 doctors had enrolled, adding that "a campaign to enroll the remaining 1,200 in our district will be started immediately."

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private secretary to General Crespo In 1884 Dr Guerra was editor of *El Liberal*, a periodical published in Colombia

### New York County

The Medical Society of the County of New York met on January 22 at the New York Academy of Medicine Building and listened to this program 1 address of the retiring president, Dr Howard Fox, 2 address of the incoming president, Dr Walter P Anderton, 3 address "Diagnostic Aids in the Surgery of the Brain," Dr Wilder Penfield, chief of neurological surgery, McGill University, by invitation, 4 discussion Dr Tracy J Putnam, professor of neurology and neurosurgery, Columbia University, by invitation

The appointment of an executive secretary for a term of five years brought out considerable discussion

The Special Committee on Infant Mortality of the Medical Society of the County of New York announces that the group meetings held each month at the New York Academy of Medicine are now open to all members of the society

At these monthly meetings selected cases of infant deaths are presented and discussed by the members of the committee and guests Especial attention is paid to the obstetric phase of the problem The meeting is then addressed by some outstanding man on some subject with which he is particularly familiar

A meeting was held at the New York Academy of Medicine on Wednesday afternoon, January 24 After discussion of cases, Dr Samuel Frant, Epidemiologist of the City of New York and Director of the Bureau of Preventable Diseases, spoke on "Epidemic Diarrhea of the Newborn"

Dr Walter C Montgomery, war-time division surgeon of the Twenty-seventh Division, A E F, who received many decorations for his services in action, died on January 15 after an illness of two years Dr Montgomery, whose home was at 214 West Ninety-second Street, was sixty-one years old

A lieutenant colonel in the New York National Guard, he had seen border service with the troops sent to Mexico, and upon the entrance of this country into the World War went to France with the Twenty-seventh Division He was decorated by France, Belgium, and Poland

In 1920, at ceremonies in Central Park, the Distinguished Service Medal was presented to him by Lieut. Gen Robert Lee Bullard His citation read

"When confronted with a shortage of personnel he displayed marked initiative and resourcefulness in organizing additional sanitary personnel"

He conducted the evacuation of 4,000 casualties in four days of action along the Hindenburg Line

Two new pamphlets, *Lymphogranuloma Venereum and Chancroid* and *Clinical Digest of Syphilis in Pregnancy*, are now available without cost to physicians from the Bureau of Social Hygiene, Department of Health, 125 Worth Street, New York City

The pamphlets were prepared by the Bureau in cooperation with the New York State Department of Health and the United States Public Health Service. Some fifty leaflets on social

hygiene for the profession and the laity are available from the Bureau

### Niagara County

The Niagara Falls health authorities have obtained what are believed to be the first convictions for violations of a recently adopted amendment to the State Sanitary Code restricting the sale of raw milk and cream in cities or health districts Within a single week, says *Health News* (Albany), two dairymen operating farms within the city limits were prosecuted for selling small quantities of raw milk on the premises Each was fined \$25 and given a suspended sentence on a charge of violating Regulation 20 Chapter III, of the Code which provides in part

"No milk shall be held, kept, offered for sale, transported, or delivered in any municipality or health district, for human consumption in fluid form in such municipality or health district, except milk to be pasteurized which is enroute to or stored at approved plants, unless such milk meets the requirements of this chapter and of local health regulations, if any, for a grade of milk permitted to be sold for human consumption in fluid form in such municipality or health district"

More recently a woman was apprehended and tried on a charge of transporting raw milk within the city limits It is expected that additional cases in which evidence has already been obtained will be prosecuted without delay

Vigorous enforcement of this state sanitary code requirement has been undertaken in an effort to avert serious epidemics of milk borne disease which may occur if the distribution of raw milk continues unrestricted According to the *Niagara Falls Gazette* which has taken active part in the drive, the principal difficulty is the increasing number of raw milk stands, some of which are located just outside of the city limits, at which farmers sell to Niagara Falls residents who either take the milk home for their own consumption or resell it to friends and relatives. Within the past six months a serious outbreak of scarlet fever occurred in Medina and another in Hornell, both of which were traced to raw milk bootlegged from farms on the outskirts of these communities

### Oneida County

Dr F John Rossi is the new president of the Medical Society of Oneida County

He was named to head the 1940 slate of officers on January 9 at the annual meeting at which Dr Paul P Gregory, Rome, retiring president presided and made his final report

Other officers chosen vice president, Dr J B Lawler, Vernon, secretary, Dr J I Farrell, treasurer, Dr H D MacFarland, librarian, Dr T Wood Clark, board of censors, Dr W C Schintzius, Dr M T Powers, Dr B F Golly, Dr P P Gregory, delegate for two years to the State Medical Society, Dr Andrew Sloan, alternate, Dr H N Squier Delegates named last year for two year terms are Dr William Hale, Jr., and Dr J F Kelley

The Utica Academy of Medicine held a dinner meeting with a symposium on cancer as the feature of the session on January 18

Papers were read on cancer of the breast and on the effectiveness of surgery and radium in

treating a specific type of cancer. Speakers included Dr. Albert G. Swift, director of surgery, Dr. Donald S. Childs, director of x-ray, and Dr. J. Howard Ferguson, pathologist, all of Syracuse University, and Dr. W. B. Dickson, Utica.

Discussions were opened by Dr. Hyzer Jones, Dr. Robert C. Hall, and Dr. C. S. Gallagher.

#### Richmond County

Talks on medical economics were delivered at a meeting of the Richmond County Medical Society on January 10 by Dr. Frederick Coonley, Dr. E. V. Catalano, and Dr. C. Douglas Walsh.

The meeting was held in the Richmond Health Center, Stuyvesant Place, St. George. Dr. H. A. Cochrane presided.

#### St. Lawrence County

From his sickbed in a Utica hospital, Harold C. Stephenson, director of the Hospital Plan, Inc., telephoned a scheduled address to the St. Lawrence County Medical Society meeting in Ogdensburg, on January 11, explaining the new Medical and Surgical Care, Inc., plan.

As a member of the Hospital Plan, which he heads as executive director, he had \$4.50 of his daily hospital expenses, as well as \$1 a day for drugs, dressings, and use of the operating room, paid during the time he was a patient there.

The medical society meeting was one of several such groups he is scheduled to address to outline the new medical service insurance plan recently approved by the state. Doctors in the thirteen counties to be covered by the plan will be organized into sponsoring bodies.

His telephone talk was in the form of a question-and-answer conversation with the president of the society. The president previously had read a paper prepared by Stephenson to the fifty doctors meeting in the A. Barton Hepburn Hospital in Ogdensburg.

The doctors then asked questions which the president relayed to Stephenson over the telephone. Stephenson's answers, by a special arrangement with the telephone company, came

out of a loud speaker at the other end of the line so that they could be heard by all present at the meeting.

#### Schoharie County

Dr. Edgar Zeh, of Waterford, who died on January 10, had practiced medicine there for over fifty years.

#### Westchester County

The Westchester County Medical Society announced on January 8 that it has urged the New York State Medical Society to recommend legislation at the present session of the state legislature to forbid the sale of sulfanilamide except by prescription of a licensed physician.

"It is our belief," the society stated through Dr. Edward H. Marsh, chairman of the society's Public Health Committee, "that the ethical pharmacists recognize their moral responsibilities in relation to 'across-the-counter' sale of dangerous drugs, but they should be protected against the competition of their less ethical colleagues, some of whom have apparently not refused to dispense these drugs on demand."

In an article appearing in the current issue of the *Westchester Medical Bulletin*, the County Medical Society calls attention to the need of this legislation and points out that last year the people of the United States consumed 373,875 pounds, or about 187 tons of sulfanilamide.

James E. Bryan of White Plains, executive secretary of the Westchester Medical Society, has been elected president of the board of directors of the Westchester Tuberculosis and Health Association. He succeeds Dr. W. Godfrey Childress, head of the tuberculosis division at Grasslands Hospital.

Mr. Bryan said income from sale of Christmas seals last year was greater than in any year since 1930. He also pointed out that since the Association was organized in 1919, tuberculosis deaths in Westchester have dropped from 105 per 100,000 of population each year to 38 per 100,000 last year.

### Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Arthur R. Bradbury	72	Buffalo	January 12	Grand Island
George A. Cherry	71	N. Y. Univ.	January 17	Manhattan
S. Welles Churchill	80	Bell	January 15	Manhattan
W. Levell Draper	75	Hahne, Chicago	January 26	Niagara Falls
Charles H. Grube	82	N. Y. Univ.	January 21	Manhattan
Walter C. Montgomery	61	P. & S. N. Y.	January 15	Manhattan
P. Clinton Pumyea	59	P. & S. N. Y.	January 18	Manhattan
Joseph J. Rowan	61	Pennsylvania	November 19	Gloversville
John C. Vaughan	64	P. & S. N. Y.	January 12	Manhattan
Samuel R. Volpe	28	Cornell	January 23	Manhattan
Nathan Winter	52	L. I. C. Hosp.	December 28	Manhattan
Edgar Zeh	79	Albany	January 10	Waterford

# Public Health News

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## Antipneumococcic Serum

**T**HE Department of Health of the State of New York, according to Dr Edward S Rogers, director of its Bureau of Pneumonia Control, is anxious to acquaint all of the physicians in the state outside of the metropolitan area with the present availability of antipneumococcic serums of the higher types. Announcements are being published in the *Health News* and through the district offices of the department.

In view of the favorable reports received from the cooperating medical centers on the effectiveness of the serums and the low incidence of reactions, types VII and VIII antipneumococcic rabbit serums were made available in September for general distribution by the Division of Laboratories and Research. Supplies are maintained by district laboratory supply stations at

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Binghamton	Olean
Buffalo	Poughkeepsie
Cooperstown	Riverhead
Corning	Rochester
Glens Falls	Syracuse
Kingston	Warsaw
Middletown	White Plains
Mineola	Yonkers

Increase in the number of stations distributing these serums will depend on the supplies available and the demands for them. Seven types of antipneumococcic serums now are being distributed, types I, IV, and V (horse) and types II, VII, VIII, and XIV (rabbit) and are available in the stations listed above. Type I serum is also distributed through ninety six other stations and type V serum through fifty five, the location of these stations is given in the list of district laboratory supply stations that was sent to physicians in the state in July, 1938. A revised edition will be issued this year. If any difficulty in obtaining serum arises, the district state health officer or the Central Laboratory should be consulted as to the nearest station where it can be obtained.

As an additional service in connection with the pneumonia control program, blood culture outfits are now being supplied through stations distributing antipneumococcic serum to physicians in districts where such facilities cannot otherwise be provided. Forty-six stations have been furnished the outfits.

## MENTAL ILLNESS NOW CURABLE

"Mental illness can practically all be cured," Dr Ralph W Bohn, clinical director of the Gowanda State Hospital, told members of the Dunkirk Rotary Club in a recent address.

Describing the care of the mentally sick, Dr Bohn said that nearly any disease of this type can be cured if it is discovered in time and proper treatment is given.

"We no longer have insane asylums," the speaker said. "They are mental hospitals, and 24 per cent of patients are voluntary admissions."

About 1 person of every 20 in the state will require treatment at one time or another, he said, but few cases are hopeless if treated in time. About 70 per cent of the patients leave the first year. Of these, 40 per cent are completely cured and the rest are well along the road toward becoming well again.

"It is just as hopeless to treat far-advanced cases of mental illness as it is to treat advanced cases of tuberculosis or diphtheria or any other disease," Dr Bohn said.

Gradually the department is building up a co-

ordinated information service of educators, ministers, public health nurses, as well as physicians who note and report possible cases of mental derangement. Through these agencies the illnesses may be discovered and treated in time.

There are approximately 100,000 patients in the mental hospitals of the state, he said, maintained at a yearly cost of \$30,000,000. Patients who are able pay for their treatment, but all, prince or pauper, receive the same care.

Mental illness, despite popular ideas, has nothing to do with the nerves. It is entirely emotional and can usually be traced to a desire to "escape from it all." Trained psychiatrists often find the roots of mental illnesses dating back many years to the patient's childhood, he told the group.

"There is no more reason to be ashamed of having been mentally sick than there is to be ashamed of having been ill physically. If we can only get people to boast about their treatment at the hospital as they do about 'my operation' our work will be made much easier."

# Hospital News

## The Federal Hospital Program

IF REPORTS of a recent presidential interview with the press are accurate, the Administration is considering a program of federal hospital construction complying in several essential respects with the platform of the A M A , observes the *New York Medical Week*. The A M A , it will be remembered, specifies that new institutions should be erected by the federal government only where needs exist which local agencies cannot supply. It stipulates local administration and control of such institutions. According to United Press accounts, the President recognizes the wisdom of these provisions.

Both the Wagner and the Harrison bills made the mistake of insisting on matched grants: a state could receive from the federal government only such amounts as it was prepared to duplicate. This provision defeats the purpose of federal assistance by making the largest sums available to the richest states. A state too poor to provide its own hospitals is too poor to match a large federal grant. A state rich enough to qualify for extensive subsidies usually has comparatively good health facilities.

Since federal aid is designed to alleviate need, it should be granted solely on the basis of need. Every state should be required to do its utmost before receiving help from Washington. When such help is given, it should be meted out in accordance with health requirements, even if the state is unable to match federal funds.

Under the plan attributed to President Roosevelt by United Press, the federal government would build and retain title to hospitals but local authorities would maintain and operate them. The United States Public Health Service and a committee of physicians would pass on all plans and investigate the ability of localities under consideration to manage the institutions built for them.

There would be no attempt at grandiose

medical centers running into millions of dollars. The average cost would be about \$150,000 for a 100-bed hospital complete with clinic, operating room, and laboratory.

It is undisputed that the establishment of hospitals in sections now lacking them would contribute to the health of the people living in those areas. Organized medicine is eager to aid in the development of necessary health facilities. If President Roosevelt's views on federal hospital construction are correctly described above, concludes the *Medical Week*, they furnish a basis for cooperation.

The report was confirmed on January 30 when the President, in a message to Congress, asked an appropriation of \$7,500,000 to \$10,000,000 for building 50 hospitals as a modest start to improve present conditions. And on February 1 a bill was introduced jointly by Senators Wagner of New York and George of Georgia to appropriate \$10,000,000 for this purpose. The operation of the program was described by the Senators, in a statement, as follows:

"Localities desiring to participate in the benefits contemplated by the legislation must show that additional hospital facilities are needed, and must give satisfactory assurances that such hospitals will be available to the public under appropriate conditions will be maintained in good repair, and will be utilized in furnishing services according to sound professional and personnel standards, as defined in regulations to be prescribed.

"The administration of the program will be guided by a national advisory hospital council, consisting of the Surgeon-General as chairman and six members selected by him from leading medical or scientific authorities who are outstanding in matters pertaining to hospital and other public health services."

## Newsy Notes

Husband as well as wife must be insured at least ten months if the wife is to receive maternity coverage under the Rochester Hospital Service Corporation insurance plan after January 1, 1941, the corporation has decided.

The change from the present rule that only the wife need be insured resulted from heavy maternity costs, according to Sherman D. Meech, managing director of the corporation.

Until March 1 of this year, corporation directors have voted, subscribers may add any eligible family members not insured at present, while a third change enables insured parents to obtain coverage for ninety-day-old infants who are in good health.

A gain of 20,677 members during 1939 was reported at the annual meeting of the Hospital Plan, Inc., of Utica, on January 15, at which time officers and directors were re-elected.

The membership is now 51,367, according to H. C. Stephenson, managing director. The insurance plan, which guarantees payment of certain hospital expenses for members who pay a specified premium, was three years old February 10.

During the past year subscribers have received care valued at \$147,552, compared to \$66,314 for 1938 and \$11,490 for 1937.

The corporation has built up an epidemic reserve of \$44,671.

Thirty-three New York hospitals, convalescent homes, and social agencies have received allocations of \$70,000 from the funds collected in the 1939 campaign of the Greater New York Chapter of the National Foundation for Infantile Paralysis, it is announced by George V. Riley, chairman of the chapter's executive committee.

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Plans for the proposed new four-story addition to Iola Sanatorium (Monroe County Tuberculosis Sanatorium) are well advanced and work will begin in the spring.

Designed to double the clinical capacity of the sanatorium and enlarge laboratory and treatment facilities, the added wing will cost between \$100,000 and \$150,000.

It is proposed to construct the addition as a WPA project.

The Greenwich Hospital Association has won the right to erect a \$1,250,000, five-story building despite the objections of a lone property-owner, who said it would "spoil the character of Greenwich."

The Board of Appeals of the Greenwich Zoning Commission granted permission to erect the building, on condition that the height does not exceed the 66 feet shown on the plans.

Plans have been filed for a \$100,000 addition to St. Agnes Hospital, a wing devoted to the care of crippled children, at White Plains.

The structure will be two stories high, in the shape of a Maltese cross, which will permit a maximum of sunlight and air. It will be constructed of brick and stone and will have a minimum capacity of forty-eight beds in addition to surgical and therapy rooms.

The wing was made possible by a donation of \$100,000 from the Martha K. Hall Foundation of New York, which has made funds available

to a number of Catholic, Protestant, and Jewish charities.

In connection with an extensive modernization and improvement program which has been carried on at Crouse-Irving Hospital, in Syracuse, during the last three years, a new education and recreation building has been provided for the School of Nursing, heretofore a part of the hospital building. The space vacated in the hospital will be used for expanding service facilities of other departments.

The new building is located at 750 Irving Avenue, next to the Crouse-Irving nurses' homes. It contains modern, large classrooms, equipped with the latest in teaching apparatus. The new building also will serve as a recreation center for the nurses.

Plans for an outpatient building for the Coney Island Hospital, Ocean Parkway and Avenue Z, Brooklyn, have been filed by the Department of Public Works with the Department of Housing and Buildings.

The plans call for construction at an estimated cost of \$630,000 of a four-story brick and stone building at 754-814 Avenue Z, adjoining the hospital. Construction of the additional building, to contain three floors of rooms and clinics and a single floor of administrative offices, will be started early next summer.

The Tioga County General Hospital at Waverly is contemplating enlargement.

## MEDICINE—AND MORE

I know of no calling which offers such a wide diversity of intellectual pleasure as that of medicine, not alone in its art and science, with an ever increasing range of new developments, but in human behavior, psychology, sociology, economics, and related activities. We follow a most useful calling, an interesting occupation filled with new and striking problems and one of the best because its only aim is the benefit of man.

Medicine is the most ancient of professions, being older than Christianity and antedating the inception of civil law. It has its own system of rewards and punishments, its own disappointments and its own glories. It is a profession that has a broadening influence on the human mind and is characterized by a most splendid charity. It is an acquisition in the best tendencies and a protection against the worst tendencies.

It constructs no trusts, it finds no monopolies, it excludes no qualified practitioner, it retains for its profit no valuable discovery and it has no standing room for the quack, the scoundrel and the charlatan.

Its best work is done in the light which beats upon its throne, not in the arena of politics encouraged by the cheers of thousands, not in the seclusion of the cloister sustained by the hope of eternal joy, but in the storm- and wind-swept country, in the streets of the village, in the boule-

wards of the city, on the desolate field of battle where pain and pestilence, illness and misery are combated often with none but God to see it. It furnishes a curiously checkered life, a life in which storm clouds alternate with sunbeams. With the exception of the ministry it stands closer than any other calling to the secret of eternity and watches death ever busy with her shuttle as she weaves her somber threads into the woof and warp of the affairs of men.

It seeks to mitigate human suffering, to prolong human life. These have ever been its watchwords, are still and always will be, constituting its cloud of smoke by day and its pillar of fire by night. One should enter such a profession with properly exalted ideals, with a belief in its greatness, its dignity, its stability, its real importance, its essential strength. One should resolve to learn to observe, to compare, to analyze, to study, to think, to avoid formulas, to cast out sordid thoughts, to repudiate shallowness, advertising, and vain pretensions.

In short, to be a worthy disciple of Aesculapius reflecting honor and credit on the profession and deriving from it the happiness that makes life worth while, being held in grateful remembrance by those whom one has served and in respect and esteem by the conferees with and among whom one has lived and worked.—*Irvin Abell M.D.*, from *New Haven address, January 1939*.

A campaign to bring about a drastic reduction of taxes on private hospitals is being waged by the Association of Private Hospitals of Greater New York. The Association is composed of sixty-six privately owned hospitals having an aggregate value of \$25,000,000. The Association declares that unless taxes are reduced several of the largest hospitals will have to close.

Years ago, persons suffering from Buerger's disease, an ailment resulting from inflammation of the lining of the arteries, took ocean voyages to relieve the pressure on their circulatory system. The rocking motion of the boat seemed to help them.

Today, the rocking boat is brought inside the hospital in the form of an oscillating bed. They have one of these beds at Crouse-Irving Hospital in Syracuse, as told in the local press, and physicians say that patients report relief from the slow "rolling" motion of the bed.

The device, known as a "Vasoscillator," was developed in the past year. It looks like an ordinary bed save that there is a small motor attached to the under framework.

The motor works silently and with little or no vibration so that other patients nearby are not disturbed. It is connected with a system of gears, operating at three speeds, which first raise the head of the bed to an angle of 45 degrees, then lowers the head and raises the foot to the same angle.

The movement is slow and it's possible for a patient to sleep while the bed is rocking.

Technically speaking, the motion varies the pressure in the patient's extremities by varying the position of the body. The oscillating bed at Crouse-Irving is in almost constant use and each patient is allowed six hours on it at a time.

Albany General Hospital, Albany, has opened a new type "step-saving" ward, equipped with modern private and semiprivate accommodations for thirty-one persons to meet growing patient demands.

The new layout, constructed on the second floor of Pavilion A, is designed to cut nursing costs more than 25 per cent, said Everett W. Jones hospital director.

Labor-saving elements in the new ward were achieved by careful planning, explained the director. Because nurses have fewer steps to take and utility rooms are strategically placed fewer workers will be needed. Yet, said Mr. Jones, the decrease in labor does not mean a decrease in patient care.

"Hospital insurance," said Mr. Jones, "has brought hospitalization within easier financial reach of a great many more people. Our studies have shown that hospital insurance subscribers are beginning to appreciably increase the demand for private and semiprivate accommodations."

An appropriation of \$22,000 was made for reconstruction and complete renovation of the ward some time ago by the hospital's board of governors. Using much of its own maintenance department labor, the hospital kept costs of the project within \$19,500. No outside architects, engineers, or consultants were employed, the entire project being worked out by the hospital's staff.

Seventy young women observed, in January, the first anniversary of a New York Junior League project, which has developed a charitable idea into a well-established, although nonpaying, profession.

The idea is to bring books and other reading matter to the bedsides of hospital patients. The project is the league's Central Bureau for Hospital Libraries. Through the efforts of Mrs. A. Victor Cherbonnier, who directs the bureau and the volunteer workers, it has grown into a profession involving the technical knowledge of library work, the skills of bookbinding, and an understanding of the needs and the psychology of the sick.

When it was set up a year ago, the library bureau had a few books and fewer workers. Today there are more than 2,000 selected volumes and seventy trained Junior League volunteers.

The bureau is active in fourteen voluntary and municipal hospitals. Plans for 1940 include the organization of libraries in the ninety member voluntary hospitals of the United Hospital Fund of New York which helped in the expansion and development of the project.

## Improvements

Ground was broken, December 27, for erection of a new twelve-story building for Lebanon Hospital at Grand Concourse and Mount Eden Avenue, in the Bronx. Two more structures will be added at a final cost of \$4,000,000, marking removal of the institution from the original site, Westchester and Cauldwell avenues.

The New York State Department of Mental Hygiene has signed contracts for the purchase of 875 acres adjoining the Pilgrim State Hospital, at Brentwood, and extending into Huntington Township as the site of a new state hospital for the insane.

There is reported to be \$6,000,000 available under the state program for construction of the

new hospital and that work will begin as soon as possible.

There are already three state hospitals in Suffolk County, the largest being Pilgrim State Hospital, which houses more than 9,000 patients and is the largest institution of its kind in the world. The other institutions are located at Central Islip and Kings Park. New buildings are now being constructed at the Pilgrim State and Central Islip hospitals.

Construction of a new wing at Strong Memorial Hospital, in Rochester, to cost about \$400,000 and designed eventually to double the institution's present facilities for private patients will be started in the spring, University of Rochester officials announce.

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Even in comparison with osteopathic education the standards set by the Peterson bill are hopelessly inadequate. At best the latter requires only a high-school diploma and twenty-four months' study in an approved chiropractic college.

This might seem to be an unattainable condition since the New York State Department of Education has never approved any school of chiropractic. The Peterson bill has a way out, however. It waives examination for chiropractors already in practice albeit illegally. Then to make the examination easier for those who can somehow qualify, it creates a separate board of chiropractic examiners.

This is a *prima facie* attempt to avoid an impartial test of chiropractic qualifications. The basic sciences are the same for all who attempt to heal the sick. There should be but one examination for all.

It is understandable that the Peterson bill should try to set up a separate examining system for chiropractors. The curriculum it prescribes is inadequate, the candidates it considers acceptable for examination are far below the standards of medical and even osteopathic applicants. The very proposal is an admission of inferiority.

Enactment of the Peterson bill would shatter the high standards of professional education and practice in this state. Just as bad money drives out good, legal recognition of any form of quackery must ultimately compromise the whole structure of medical care.



# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue Brooklyn, N Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers.

## RECEIVED

**The Life and Death Instincts (The Vita and the Fatum)** By Arthur N. Foxe, M.D. Octavo of 64 pages. New York, Monograph Editions, 1939. Cloth, \$2.00.

**The Psychological Aspects of Pediatric Practice** By Benjamin Spock, M.D., and Mabel Hirsch, M.D. Octavo. New York, New York State Committee on Mental Hygiene, 105 E. 22nd Street, 1939. Paper, \$0.25.

**Bacteriology** By William W. Ford, M.D. 16mo. of 207 pages, illustrated. New York, Paul B. Hoeber, Inc., 1939. Cloth, \$2.50 (Clio Medica Series, Volume XXII).

**Training for Championship Athletics** By C. Ward Crampton, M.D. Octavo of 303 pages, illustrated. New York, McGraw-Hill Book Co., 1939. Cloth, \$2.50.

**Supervision in Public Health Nursing** By Violet H. Hodgson. Octavo of 376 pages. New York, The Commonwealth Fund, 1939. Cloth, \$2.50.

**Cancer of the Larynx** By Chevalier Jackson, M.D., and Chevalier L. Jackson, M.D. Octavo of 309 pages, illustrated. Philadelphia, W. B. Saunders Co., 1939. Cloth, \$8.00.

**Mind Explorers** By John K. Winkler, and Walter Bromberg, M.D. Octavo of 378 pages. New York, Reynal & Hitchcock, 1939. Cloth, \$3.00.

**Facts and Theories of Psychoanalysis** By Ives Hendrick, M.D. Second edition. Octavo of 369 pages. New York, Alfred A. Knopf, 1939. Cloth, \$3.00.

**Epidemiology in Country Practice** By William N. Pickles, M.D. Octavo of 110 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$2.50.

**An Introduction to Dermatology** By Norman Walker, M.D., and G. H. Percival, M.D. Tenth edition. Octavo of 391 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$7.00.

**The Physiological Basis of Medical Practice** A University of Toronto Text in Applied Physiology. By Charles H. Best, M.D., and Norman B. Taylor, M.D. Second edition. Octavo of 1872 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$10.

**Tumors of the Hands and Feet** Edited by George T. Pack, M.D. Quarto of 138 pages, illustrated. St. Louis, C. V. Mosby Co., 1939. Cloth, \$3.00.

**Obstetrical Manikin Practice** By Lyle G. McNeile, M.D. Quarto of 111 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$2.00.

**Electrocardiographic Patterns. Their Diagnostic and Clinical Significance.** By Arhe R. Barnes, M.D. Quarto of 195 pages, illustrated. Springfield, Charles C. Thomas, 1940. Cloth, \$5.00.

**The Electrocardiogram and X-Ray Configuration of the Heart.** By Arthur M. Master, M.D. Quarto of 222 pages, illustrated. Philadelphia, Lea & Febiger, 1939. Cloth, \$6.50.

**Endocrine Gynecology** By E. C. Hamblen, M.D. Quarto of 453 pages, illustrated. Springfield, Charles C. Thomas, 1939. Cloth, \$5.50.

**Principles and Practice of Aviation Medicine** By Harry G. Armstrong, M.D. Octavo of 496 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$6.50.

**The Surgery of Injury and Plastic Repair** By Samuel Fomon, M.D. Quarto of 1409 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$15.

**Blood Groups and Blood Transfusion** By Alexander S. Wiener, M.D. Second edition. Quarto of 306 pages, illustrated. Springfield, Charles C. Thomas, 1939. Cloth, \$5.00.

**The Medical Record Visiting List or Physicians' Diary for 1940** 16mo. Baltimore, William Wood & Co., 1939. Cloth, 60 patients per week, \$2.00.

**The Vitamins** A Symposium Arranged Under the Auspices of the Council on Pharmacy and Chemistry and the Council on Foods of the American Medical Association. Octavo of 637 pages, illustrated. Chicago, American Medical Association, 1939. Cloth, \$1.50.

**A Topographic Atlas for X-Ray Therapy** By Ira I. Kaplan, M.D., and Sidney Rubinfeld, M.D. Quarto of 55 plates. Chicago, Year Book Publishers, Inc., 1939. Cloth, \$4.00.

**Ophthalmology** By Burton Chance, M.D. 16mo. of 240 pages, illustrated. New York, Paul B. Hoeber, 1939. Cloth, \$2.00 (Clio Medica Series Volume XXI).

**Ways to Community Health Education** By Ira V. Hiscock. Octavo of 306 pages, illustrated. New York, The Commonwealth Fund, 1939. Cloth, \$3.00.

**Fractures** By Paul B. Magnuson, M.D. Third edition. Octavo of 511 pages, illustrated. Philadelphia, J. B. Lippincott Co., 1939. Cloth, \$5.00.

**A Guide to Workmen's Compensation** The Law and Its Practice in New York State. By H. D. Margulies, and Max Bloom. Duodecimo of 96 pages. New York, The Authors, 1939. Paper, \$5.00.

**An Introduction to Medical Mycology** By George M. Lewis, M.D., and Mary E. Hopper, M.S. Quarto of 315 pages, illustrated. Chicago, Year Book Publishers, Inc., 1939. Cloth, \$5.50.

**Industrial Hygiene** By Various Authors. Edited by A. J. Lanza, M.D., and Jacob A. Goldberg, M.A. Octavo of 743 pages, illustrated. New York, Oxford University Press, 1939. Cloth, \$8.50.

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Heretofore Albany has steadfastly refused to open the door to unqualified sectarian practitioners. If this state is to retain its leadership in medical education and practice, the legislature must reaffirm its loyalty to the principles of the Medical Practice Act by defeating the Peterson bill.

## The Radiology Bill

If it were not for the decision of the Court of Appeals in the case of *Sausser v. the New York City Health Department*, it might seem supererogatory to seek legislation defining radiology as a method of medical practice. What purpose has radiology if not to diagnose and treat disease?

True, the mere act of taking a radiograph is worthless without expert interpretation of the shadows which indicate the site and nature of a lesion. Properly taken and interpreted, however, the radiograph is one of the most valuable diagnostic agents of modern medicine.

A trustworthy explanation of radiographic findings demands full knowledge of the anatomy, physiology, and pathology of the human body—in short, a complete medical education. Nevertheless, by some strange process of reasoning, the Court of Appeals has decided that neither "taking an x-ray photograph" nor "mere explanation" of the film is "diagnosis."

The absurdity of this statement must have been apparent to the Justices for further on in the decision they modified it slightly. "It may be conceded that the reading of an x-ray photograph would be a slight and necessary step in diagnosis, but it would fall far short of what we understand by these terms." Since x-ray is often the main, and sometimes the sole, diagnostic factor, it is hard to see how it can be dismissed as a "slight," nonmedical "step in diagnosis."

Moreover, the Medical Practice Act says nothing about "steps" in diagnosis. It states that anyone practices medicine who undertakes "by any means or method to diagnose, treat or prescribe for any human disease." The decision of the Court of Appeals in the *Sausser* case contravenes this provision and exposes the public to incompetent radiologic practice at the hands of lay technicians and outright quacks.

To remedy this situation the Desmond-Vincent bill explicitly describes radiology as a medical procedure and limits its practice to persons licensed under the Medical Practice Act. It does not interfere with the activities of bona fide technicians working under professional supervision. Neither does it curtail any of the existing

prerogatives of physicians and dentists with respect to the use of roentgen rays It works no hardship on any but those who seek to practice medicine without having first qualified for this difficult, responsible work

Wholly apart from the physical dangers inherent in the improper use of x-rays and faulty interpretation of radiographic films, the Desmond-Vincent bill is an important public health measure Unless radiology enjoys the same protection as other medical procedures, its progress will lag The Desmond-Vincent bill not only assures the public of competent radiologic service but encourages continued development in this important field

### The Ensuing State Meeting

It is not too early for our members to reserve May 6 to May 9 when the Medical Society of the State of New York will meet again in annual session \* The more members who attend and listen to the discussions of the many problems upon which there is debate and deliberation in the House of Delegates, the more widespread will be the understanding in the profession of the situations with which it is confronted It is an educational experience and will provide the answer to the captious and flippant critic who may think that all our discussions center in self-interest Were the general public to attend, they, too, would realize that most of the debate is predicated upon concern for the public welfare, and they would be better able to comprehend the position taken by organized medicine in appraising proposals as a solution for medico-economic problems

The profession at large and the public would do well to realize that, trained as we are to judge experiments and propositions for the cure of human ills with a healthy skepticism regarding sudden and miraculous panaceas, we cannot lay aside this critical attitude when confronted by social solutions which might be worse than the ills confronting us

At the forthcoming meeting the scientific exhibit will be an education in itself Here visitors can make actual personal contact with exhibitors, each of whom is usually an enthusiast on the topic which he is presenting Pertinent questions and adequate answers will pass from man to man, and the visitor goes away very often stimulated by the contact which he otherwise could not make so easily and with an added knowledge of the topic in which he is interested

The technical exhibit this year has been much curtailed, but the quality of the products that these firms are offering to the profession and the public has been enhanced

\* See announcement page 372

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No one more than the physician realizes the need for potent hemostatics. The continued manufacture and sale of impotent agents shows a disregard by the makers for the results of scientific study. Two of the products, bovine blood derivative and hypodermic horse serum, were shown twenty years ago to possess no coagulative action<sup>1</sup> and yet they are still being manufactured and used. The work of Aggeler and Lucia should make commercial houses take stock and discontinue the sale of biologicals which medicine has shown to be ineffectual.

### Benzedrine in Alcoholism

The treatment of alcoholism is more and more being understood as properly belonging in the realm of psychotherapy even though the practitioners of this branch of medicine are somewhat discouraged by their efforts. The chronic alcoholic addict has a fundamental personality defect which is extremely difficult to change but failure may be due to the fact that the proper psychoanalytic approach has not as yet been found. Nevertheless, it is possible to obviate some of the physiologic and psychologic aftereffects of acute inebriation quickly and effectively by the judicious use of benzedrine sulfate.

According to Reifenstein and Davidoff,<sup>2</sup> who have investigated the action of this drug in mental states characterized by depression or self-absorption, acute alcoholic psychosis and Korsakow's syndrome in alcoholics respond well to the use of amphetamine sulfate. Acute intoxication, with its attendant boisterousness, can be made to disappear rapidly by the use of this drug. A "hang-over" is soon dissipated, both in acute and chronic alcoholism. Where the patient is institutionalized, the results are even more striking.

These authors impress us with the futility of this drug as a cure for addiction to alcoholic beverages. Somewhat analogous to vitamin B deficiency therapy in the treatment of alcoholic polyneuritis, benzedrine sulfate merely improves the psychotic and physiologic aberrations which attend acute intoxication. Neither has any effect in altering a habitual tendency toward inebriation. Reifenstein and Davidoff cannot agree with Bloomberg<sup>3</sup> who found that the use of this drug in chronic alcoholism permitted a sufficient period of sobriety for the institution of psychotherapeutics. Nevertheless, it appears that this drug has a definite place in the therapy of some phases of acute alcoholism.

<sup>1</sup> Hanzlik, P. J. and Weidenthal, C. M. *J. Pharmacol. & Exper. Therap.* 14: 157 (1919).

<sup>2</sup> Reifenstein, E. C. Jr. and Davidoff, E. *New York State J. Med.* 40: 247 (Feb. 15) 1940.

<sup>3</sup> Bloomberg, W. *New England J. Med.* 220: 129 (1939).

The scientific program has been the concern of committeemen during the entire year, and the section chairmen and these committeemen have endeavored to present a program of outstanding merit.

The president is arranging our annual banquet meeting in an unusual manner. It is premature to speak of details now, but all of them will be published in a subsequent issue of the JOURNAL. The Women's Medical Society of the State of New York and the Woman's Auxiliary also meet at the same time. Arrangements are in progress so that the meetings will integrate one with the other, and thus there will be assembled at the Waldorf-Astoria this spring a very complete and satisfying intellectual feast!

A record attendance is expected. We feel that we express it conservatively when we promise that those coming to the meeting will find it unusually worth while.

### Potency of Coagulants

There are many commercial preparations on the market which are offered for use as hemostatic agents by virtue of their supposed ability to increase the coagulability of blood. Some are derived from brains of a variety of animal species, some from tissue fibrinogens, and some from bovine blood and from horse serum. They are available for use either topically, *per oram*, or by hypodermic injection. Finally there are the several types of snake venom. The efficacy of all of these is extolled by their manufacturers, in many instances based upon experiments conducted on laboratory animals. But since these coagulants are to be used in humans it is of little practical value whether or not a particular product will materially shorten the coagulation time of rabbit blood. It would seem that the only valid test of potency would be the estimation of its activity on human blood.

Aggeler and Lucia,<sup>1</sup> using human plasma, assayed biologically the coagulative potency of seventeen of these products, and their findings reveal a great discrepancy with claims made by the manufacturers of these agents. The only substances studied that were significantly active were the crude tissue emulsions of thromboplastin intended for local use and the two snake venoms (Ferrelance and Russell viper). The fibrinogen products proved relatively impotent as coagulants and the thromboplastin intended for hypodermic use was found to be inactive. Horse serums were inactive in human hemophylic plasma except in high concentrations, and then only to a slight degree. The commercial product made from bovine blood yielded no coagulative activity in any concentration.

<sup>1</sup> Aggeler, P. M. and Lucia, S. P. Am. J. M. Sc. 199: 181 (Feb.) 1940

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## Medical Relief in New York State

On February 8, 1940, the Council of the Medical Society of the State of New York received the following report and directed that it be published. Attention of county medical society secretaries and presidents is respectfully called to the request for local reports on medical relief. These reports are to be sent to Dr. Augustus J. Hambrook, 40 State Street, Troy, the chairman of the Council Committee on Public Relations and Economics. The report follows:

"The Committee on Public Relations and Economics regrets that it has to report its appointment in the progress of its efforts to improve the status of medical relief in this state. To the last House of Delegates, the committee reported that it had recommended to the State Department of Social Welfare a new setup for the local welfare machinery. A professional advisory committee was suggested for each county, the medical members of such committees to be appointed by the county welfare officer from a list submitted by the county medical society. Other members such as dentists and druggists were to be selected by their county organizations. It was held that all decisions be vested in this committee instead of being referred to the medical social worker. It was determined that there were thirty situations which commonly arise in the administration of medical relief which could be decided locally and thereby obviate needless and unnecessary delays. Up to a few months ago this plan seemed to have the approval of the state department.

"Included in the program was a revised fee schedule based on the Workmen's Compensation Fee Schedule, but with a reduction. It was recognized that the Workmen's Compensation Fee Schedule was the lowest which would permit the doctor to do satisfactory work and still realize a profit for his services. Welfare fees, however, are paid out of current tax funds instead of from industrial profits as in the case of Workmen's Compensation. It was felt that the doctor accepting these slightly lower fees could accept this schedule as his share of the community burden in the care of the indigent. The Welfare Manual now in force, after long discussions with representatives of the State Department of Social Welfare, was revised with apparent satisfaction on both sides.

"No definite action was taken by the department after several months of waiting. Finally, the commissioner called on November 28, 1939, a meeting in Albany with a large number of local welfare officers in attendance from different parts of the state. The committee attended this meeting, and the program as previously suggested, after two years of work, was discussed in general and in detail. The Social Welfare Department later advised the committee that the local welfare officers were not in favor of adopting the proposals of the society.

"The committee deems it wise that each county welfare officer be approached by representatives of the county medical societies in the effort to secure first-hand information as to the attitude of each welfare officer on the recommendation of the Medical Society of the State of New York for reorganization and supervision of medical relief in each county with report to the state society committee as soon as possible. The general situation existing at the moment is considered by this committee to be intolerable."

The essential features of the State Society's proposition, as presented to the House of Delegates on April 24, 1939, are as follows: (1) establishment of professional advisory committees in local welfare districts, (2) revision of fee schedules now in force, (3) reduction in the amount of red tape to the minimum needed for quick and accurate management of medical relief and the payment of fees, and (4) retention without exception by the indigent of the physician or physicians of their own choice.

# SULFANILAMIDE IN THE TREATMENT OF SCARLET FEVER

## The Need for a Research Point of View

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SINCE the introduction of sulfanilamide, it was logically assumed that it would prove useful in scarlet fever. Likewise, it seemed reasonable to expect that the use of sulfanilamide in the treatment of scarlet fever would throw some light on its mode of action. The reported results, however, appear to be confusing and inconclusive. At first, clinicians simply recorded the exhibition of sulfanilamide in a given number of cases and the recovery of those patients. Later, efforts were made to use the drug discriminatingly in an endeavor to arrive at some conclusion as to its effectiveness and indications. It is the purpose of this paper to examine some of the results critically, bearing in mind at the same time the vast changes that have taken place in scarlet fever itself.

It has long been known that in the last seventy-five years, scarlet fever has behaved differently from the other common communicable diseases. Seventy-five years ago, the mortality from scarlet fever in this country stood approximately at 100 per 100,000 population. By 1910, it had dropped to about nine. Provisional figures for 1938 indicate a scarlet fever mortality in the United States of one. Although many changes have taken place in these years, it is not possible to account for this phenomenal decrease on the basis of reporting, incidence, age distribution, or therapy. There is abundant evidence that the number of cases has not decreased over the years, hence it must be that fewer cases die. This is corroborated further by a similar drop in the

case fatality rate. Chapin<sup>1</sup> has gathered evidence on this point from various parts of the world, and he has theorized that the application of isolation and quarantine measures to scarlet fever has tended to eliminate the more virulent strains. However, the fact that mild and severe cases may occur in the same family outbreak rather tends to emphasize that changes or differences in the host may be a significant factor. I have noted that adults with fatal scarlet fever almost invariably showed also positive Schick tests, suggesting inability generally to produce antibodies.

In Syracuse, outbreaks of scarlet fever occurred in 1924 and in 1937. In both years, the number of cases reported was practically identical, 1,216 and 1,218, respectively. Sixteen deaths were recorded in 1924 and only 4 in 1937. Unfortunately, there are no further data on the 1924 outbreak comparable with those of the last outbreak.

A change in the character of a disease, such as the decrease in the severity of scarlet fever, is certain to influence our interpretation of the results of specific therapy. This was clearly apparent in 1924 when scarlet fever serum was introduced. The confusion in the reported results was striking and was brought about not only by differences in the titer and valency of the different serums employed but also by the failure to take into consideration the types of cases. Certain workers advocated the use of serum in every early case, regardless of its mildness. The occurrence of serum sickness soon discouraged its routine use. Then questions began to arise whether

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Syracuse University College of Medicine.

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the serum did more than neutralize the toxin and whether it had any effect in lessening septic complications. After considerable analysis, it became evident that serum was highly useful in cases showing toxemia. In such cases, an adequate dose of potent serum employed early in the disease exerts a neutralizing effect upon the toxemia, overcomes the prostration or delirium, and causes the rash to disappear in twenty-four to thirty-six hours. The dread of the fulminating toxemic cases which often showed a livid eruption, profound prostration, and an early fatal termination has practically disappeared, since such cases are now rarely encountered, but it is reasonable to expect that serum therapy in such cases would have saved many lives.

More recently, we have come to be increasingly concerned with the septic or invasive phase of scarlet fever. Severe cases may be predominantly toxemic or septic, or various combinations of these. Some cases with considerable toxicity may show but little tendency to invasiveness. There appears to be no direct relationship between toxin production and the invading properties of the streptococcus. Septic cases, too, vary a great deal in the amount of accompanying toxemia. Moreover, cases mild at the onset may, nevertheless, exhibit septic complications in the second or third week. But, on the other hand, the moderate and severe cases are much more liable to septic or invasive complications. Too, these complications are quite frequently associated conditions, really arising at the beginning of the disease—a purulent nasal discharge, enlarged and tender lymph nodes, and catarrhal or suppurative otitis media may be present at the onset and even precede the scarlatinal rash. In certain cases, the septic invasion may later extend to the mastoid cells, the meninges, or the blood stream. Certain other complications, known as sequelae, such as glomerulonephritis, adenopathy, and joint symptoms, may ensue at the end of the disease, these have been looked upon as phenomena of sensitization or allergy, and are not to be included among the

septic complications. Without a consideration of the foregoing factors, it is not feasible to make a critical evaluation of a specific mode of treatment in scarlet fever.

In beginning our observations on the use of sulfanilamide\* in the treatment of scarlet fever early in 1937, we first looked for possible effects on the eruption and on the toxic manifestations. It soon became clear that sulfanilamide exerts no such influence. Chart 1 shows an example of its failure to influence the rash or the toxemia in a moderate case with a bright rash. This is in conformity with the findings of other observers and appears to show that sulfanilamide has no effect on the toxin production in scarlet fever. It was this clinical observation that made us question Osgood's conclusion from his laboratory experiments that sulfanilamide acts upon the toxin of the streptococcus.<sup>2</sup>

We next turned to the effect on septic complications. It appeared necessary, first, to form a more definite concept of septic complications, to define, if possible, the degree of invasion that constitutes complication. How much enlargement of the cervical lymph nodes can be designated as adenitis? How much injection of the drum shall be labeled catarrhal otitis media? At what point can it be said clinically that sinusitis has supervened? Moreover, most of these conditions are frequently essential phenomena in patients who are more than mildly ill—associated conditions present by the time the patient is admitted to the hospital, and absent usually in mild cases. In recent years, nearly 60 per cent of moderately ill cases hospitalized within three days from their onset showed evidence of septic conditions on admission. Since mild cases predominate nowadays, it seemed advisable to administer the drug to the moderately severe and severe cases of the septic variety. It seemed wise, therefore, to focus our attention primarily on suppurative otitis media. This is definitely objective the

\* The sulfanilamide employed in the early months of 1937 was restricted to prontosil (also prontosil).

TABLE 1.—SELECTED CASES OF SCARLET FEVER TREATED AT THE CITY HOSPITAL, SYRACUSE, IN WINTER OF 1937

	Type of Specific Treatment		
	Serum	None	Sulfanilamide
Number of cases	11	19	23
severe	5	1	1
moderate	6	19	22
Complications			
suppurative otitis media	6	7	2
Average admission temperature	102.7 F	101.8 F	102.1 F
Average duration of fever (hours)	204	112	57
Average stay in hospital (days)	27.5	29	27

ear discharges or does not discharge, it is not likely to be overlooked and it does not need to be graded

Sulfanilamide was not available for our use until the end of January, and, desiring to put as many suitable cases as possible under treatment during the next few months, we chose clinically similar cases of the same age from January as controls. Approximately 1 grain of sulfanilamide per pound was given during the febrile stage and half the dose during two or three days after the temperature became normal. The treated cases were, for the most part, denied throat irrigations or nose drops. Toxic cases treated with serum are tabulated for comparison. From Table 1, it is seen that in 19 cases that served as controls, 7 instances of suppurative otitis media were encountered, whereas in 23 similar cases treated with sulfanilamide only 2 suppurative ear cases were noted.

This series is small, however, for so variable a disease as scarlet fever. Secondly, the observations were made during an outbreak and it became apparent that the severest cases occurred early in the outbreak. By the end of March, 655 of the 1,218 cases of 1937 had been reported, and subsequently the mild cases predominated even more.

With Wesselhoft and Smith,<sup>2</sup> I feel that a large series is necessary before one can eliminate the factor of chance variation that is so inherent in scarlet fever. In their series of 100 cases each, they had 15 cases with suppurative ears in the control group and only 6 in the sulfanilamide group. Although they speak of using selected cases, they do not give the

TABLE 2.—SELECTED CASES OF SCARLET FEVER TREATED AT THE SYRACUSE CITY HOSPITAL IN 1938 BY AGE AND SEASON

Age	Without Sulfanilamide		With Sulfanilamide	
Under 5		11		11
2 yrs.	3		6	
3-4 yrs.	8		5	
5-9 yrs.		17		17
10-14 yrs.		6		9
15 yrs. and over		7		6
		41		43
Season				
January to March		16		15
April to June		9		16
July to September		4		8
October to December		12		4
		41		43

basis of type selection, except that there were no complications on admission, and they do not elaborate further.

As an indication of the care to be exercised in evaluating results, reference must be made to the series by Peters and Havard<sup>4</sup> in England, who treated 150 cases with sulfanilamide and used a similar number for controls, but gave serum to 56 cases of the latter. They noted that 35 per cent developed one or more complications in the sulfanilamide group as against 56 per cent in the controls. When one examines their table of complications, however, it is seen that albuminuria, rheumatism, endocarditis, and nephritis are grouped together with the more definite septic complications, when it comes to otitis media it is found that there were 11 in their treated group and 10 in the controls, hence, the validity of their conclusions may well be questioned.

It was planned to continue more detailed observations during 1938, but following an epidemic year the incidence was low and but 128 scarlet fever patients were hospitalized. For this analysis, only those cases were selected that at the time of admission had been ill not more than three days from the onset. Although it was deemed from our previous experience that mild cases usually got along well enough without specific treatment, it was desired to include all types of cases in the group treated with sulfanilamide as well as in the group treated without this specific drug. Eighty-four cases were found suitable for study, and of these 43 had received sulfanilamide and

TABLE 3—SELECTED CASES OF SCARLET FEVER TREATED AT THE SYRACUSE CITY HOSPITAL IN 1938, BY DURATION OF FEVER

Duration of Fever	Without Sulfanilamide	With Sulfanilamide
None	6	1
1-2 days	28	15
3-4 days	7	15
5 days and over	5	12
	41	43

41 had not. In Table 2, these selected cases are grouped as to age and season and it can be seen that the distribution for age is practically identical

In Table 3 the two groups are arranged by the duration of fever. This duration refers to the time from admission to the first sustained normal temperature and does not take into account fever of a later time

Under types of disease, the cases are grouped in Table 4 as they appeared in their first examination and as they were reclassified subsequently in the light of the course during their stay in the hospital. A mild case was defined as one coming in with a temperature under 102 F and without evidences of invasion of underlying or adjacent tissues. Cases with fever of 102 F but under 105 F, and all cases with definite evidences of invasive complications when admitted were termed moderate cases. Cases with an admission fever of 105 F or over, or with fever over 102 F and having serious complications, like surgical mastoid or bacteremia, were classified as severe.

It will be noted that the changes in classification were not numerous. In the group without sulfanilamide 6 were considered moderate on admission, but subsequently 8 were graded as moderate and 1 as severe, in the sulfanilamide group, 19 were considered moderate on admission and 22 subsequently. The cases treated without sulfanilamide do not constitute a control group as a whole, since the mild cases constituted 78 per cent in this group as against 46 per cent in the sulfanilamide group.

The incidence of complications and their variety hold the chief interest. For facility in analysis, only one complication was recorded for each patient

TABLE 4—SELECTED CASES OF SCARLET FEVER TREATED AT THE SYRACUSE CITY HOSPITAL IN 1938, BY TYPE OF DISEASE AND SEPTIC COMPLICATION

Type of Disease	Without Sulfanilamide		With Sulfanilamide	
	On admission	Subsequently	On admission	Subsequently
Mild	35	32	23	20
Moderate	6	8	19	2
Severe	—	1	—	1
	41	41	43	43
Septic Complications				
Suppurative mastoiditis		1		
Suppurative otitis media	2	2	2	4
Catarrhal otitis media			5	6
Peritonsillar abscess				1
Peritonsillitis			1	1
Cervical adenitis		3	2	3
Purulent rhinitis		2	4	5
	1	8	14	20

showing evidence of septic involvement, but the complication chosen was the most significant one or the primary one, thus, with peritonsillar abscess, cervical adenitis is quite to be expected, with suppurative otitis media, there is likely to be rhinitis or sinusitis, with mastoiditis, there is a preceding otitis media, sinusitis was not recorded unless there was unmistakable clinical evidence and was therefore included with rhinitis in this series, rhinitis refers to fairly profuse mucopurulent nasal discharge anteriorly and posteriorly. This arrangement, I think, is in consonance with clinical observations and avoids the confusion of dealing with too many multiple groupings.

Complications were also separated into those present on admission and those showing up subsequently, after a lapse of twenty-four hours or longer. From Table 4 it can be seen that the change in complications is greater, on the whole, than the change in classification of type. In the group without sulfanilamide, 3 patients with septic complications were observed on admission and the number was subsequently increased to 8. In the sulfanilamide group, 14 had septic complications on admission and this was increased to 20 subsequently. It will be noted that the proportion of patients with septic complications corresponds very closely to the proportion of moderate

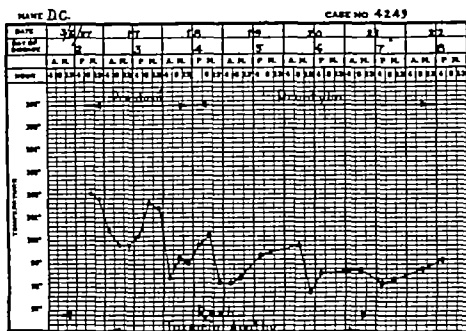


CHART 1 Showing the duration of rash and toxemia not shortened by sulfanilamide

and severe cases in the two groups. When, however, attention is focused on the suppurative ear cases it is seen that in the untreated group they number 3, or 33 per cent, among the 9 patients more than mildly ill. In the sulfanilamide group there were 4 suppurative ear cases out of 23, or 17 per cent. It could be pointed out, too, that among the suppurative ear cases in the first group there was 1 surgical mastoid but none in the sulfanilamide group, and that the suppurative ear cases were increased by only 2 after admission, although 5 catarrhal ear cases were found on admission. Nevertheless, the small number of cases involved does not warrant definite conclusions.

Undue enthusiasm over individual cases has to be guarded against. It would be very easy, for example, to single out two brothers, five and seven respectively, in a family outbreak of 5 cases. Upon admission both looked like mild cases with but slight rhinitis. Both subsequently developed suppurative otitis media, bilateral in the five-year-old, right-sided in the elder brother. Sulfanilamide was given to the younger brother and he recovered, the other, without sulfanilamide, had the only mastoidectomy in this series. Nonetheless, it is one of the most unsound tendencies in practice to draw conclusions from a single case of an inherently varying morbid process. Clinical impressions have their usefulness, and in clinical studies controls are only such in part, in view of varied and subtle in-

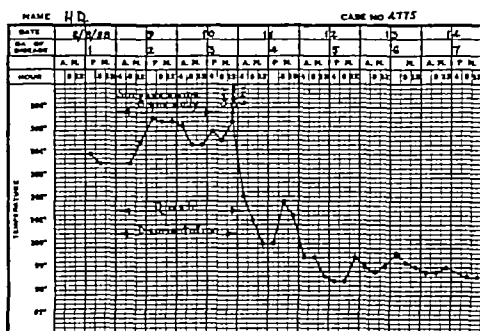


CHART 2 Rash and toxemia not affected by large doses of sulfanilamide in first three days of illness. Prompt subsidence of fever, rash, and toxemia following serum administration.

dividual differences which cannot be wholly equated, but conclusions can be valid only if based upon clinical experience and judgment within an acceptable statistical framework.

Perhaps it may be permissible to digress for a moment to enlarge on relapse, a rare complication not listed in the table, which occurred in the untreated group. A boy of nine was admitted with a mild but typical scarlet and showed a negative Dick test and a negative rash extinction (blanching) test within twenty-four hours. On his twenty-first day he complained of sore throat, became feverish, and a rash appeared the next day which was rather scarlatinal in type. The blanching test was again negative. His throat culture and 5 cc of his serum were sent to the State Laboratory. The report stated that his culture produced toxin which in intracutaneous tests on rabbits was neutralized by antitoxin of the standard strain, No 165 (Dochez, N Y 5), but a 1:5 dilution of his serum failed to neutralize either the homologous toxin or the toxin of strain No 165.

The ease with which sulfanilamide may be given has tended to deny serum to cases that might have benefited from its use. Chart 2 shows a severe case to whom large doses of sulfanilamide were given from the onset without influencing the high fever or the toxemia and prostration, following the administration of convalescent serum, the fever dropped

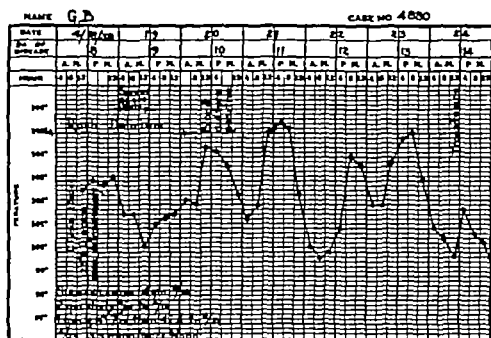


CHART 3 Severe case of scarlet fever with toxemia and streptococcus bacteremia treated with sulfanilamide, serum, and transfusion

promptly, the rash began to fade, and the change in the patient was most striking. Cases of this sort appear to support the increasing evidence, both clinical and experimental, that specific antibody adds to the effectiveness of sulfanilamide.

Another illustrative case is that shown in Chart 3. This patient was admitted on the eighth day of the disease with fever of 102.6 F that did not at all measure the extreme illness of the patient. She was delirious, dehydrated, and showed a livid erythema. She had received 4 Gm sulfanilamide four days previously and 2 Gm each day for three days previous to admission. A large dose of scarlet fever serum was given intravenously and within twelve hours there was a marked change in her condition, when the temperature rose to 104.4 F, the third day of admission and the tenth day of the disease, and the blood culture taken that day revealed streptococcus bacteremia, sulfanilamide was again started and the concentration reached 5.5 mg. Her temperature became normal on the fifteenth day and she made an uneventful recovery. Two earlier (1935) cases of scarlet fever with positive blood cultures, before sulfanilamide was available, and treated with serum and transfusions ran septic temperatures for nine and five weeks, respectively. None of these gave evidence of pyemia.

The chief objection to the use of heterologous serum in scarlet fever is the occurrence of serum reactions. Chart 4 illustrates the temperature curve in a

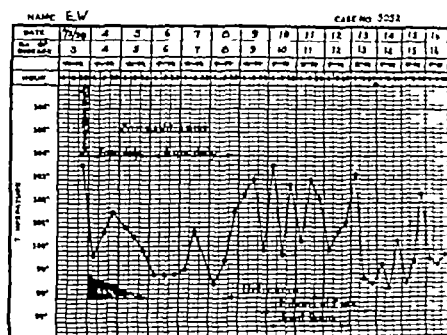


CHART 4 Moderately severe case of scarlet fever with toxemia and septic invasion, treated with antistreptococcus serum and sulfanilamide, showing serum reaction.

moderately severe case that combined toxic and septic features. He showed toxemia, prostration, and a profuse bright red rash, there was grayish membrane on the tonsils, the cervical glands were enlarged and tender, and the profuse mucopurulent nasal discharge excoriated the upper lip. He needed serum and sulfanilamide, it was felt. Although the rash faded in a day and the fever fell to normal within sixteen hours after serum injection, it rose again within a few hours to a moderate degree, but continued from the eighth to the thirteenth day, because of serum sickness, to practically the same height as at the beginning of the sickness.

In contrast, Chart 5 presents the fever chart of a patient with a moderately severe toxic case with a deep red rash treated with sulfanilamide alone. His fever persisted for nineteen days and the rash did not fade completely till the end of the second week. He was prostrated and ill throughout that period, had troublesome emeses for four days during which time sulfanilamide was discontinued, he appeared cyanotic during the greater part of the first two weeks, complained of general pains, headache, and fatigue, and refused all food. He gave a most distinctly positive rash extinction (blanching) test which persisted for nearly two weeks. When I saw him with his physician during the second week I could not help feeling that his illness might have been shortened by serum.

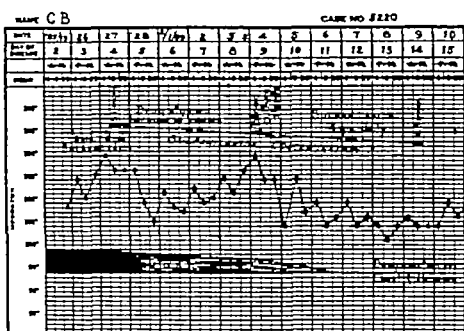


CHART 5 Moderately severe toxic case of scarlet fever treated with sulfamylamide and without serum, showing the prolongation of fever and persistence of rash

administration, but by the tenth day it seemed unwise to give serum.

Physicians who tend to be wary of employing serum therapeutically often fail to be concerned over the possible taking of unwarranted risks with sulfanilamide. The literature has called attention amply to the various dangers and contraindications of sulfanilamide. Our own experience with some 500 cases has proceeded without cause for anxiety, but the vast majority have been treated at the hospital where careful observation and blood studies were available. Apart from cyanosis, drug rash, drug fever, vomiting, aching, and apathy, no serious difficulties were met. A case with febrile reaction is shown in Chart 6. This case was extremely mild and required no treatment. The physician on the case wanted to "play safe" by giving sulfanilamide. On the eighth day her temperature, which had not gone above 99.2 F previously, rose to 101.4 F and the next day to 102.4 F. She had had no symptoms before, but now became irritable and complained for three or four days of headache, general pains, anorexia, insomnia, chilliness, and depression. When one considers that in recent years about 75 per cent of our hospitalized cases have been mild, it seems unwarranted to employ in such cases any therapy that carries more risk relatively than the disease itself. The old medical aphorism, *Primum non nocere*, must not be forgotten. We should avoid doing harm.

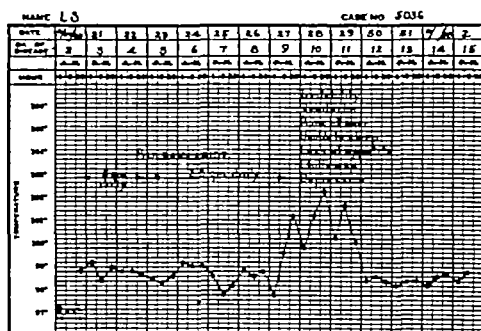


CHART 6 Mild case of scarlet fever given sulfanilamide during the first week, showing drug fever

with unnecessary treatment, however well intentioned

## Summary

Attention is called first to the striking and steady change in the character of scarlet fever over the last seventy-five years, the mortality in 1938 being but one-hundredth of that in 1861. This mildening of scarlet fever caused some difficulty in the beginning in evaluating scarlet fever serum and is causing similar difficulty with sulfanilamide.

There is concurrence in the conclusion that sulfanilamide exerts no evident influence on the toxic phase of scarlet fever. There are several studies, consistent with that here reported, suggesting that sulfanilamide may lessen the incidence of suppurative ear complications, but on careful consideration of the marked variability of scarlet fever, it is felt that no series is as yet large enough to be accepted as conclusive.

A nonepidemic series of last year at the Syracuse City Hospital is analyzed on the basis of criteria formulated for designating types of severity and for differentiating complications associated with the onset of the disease from those developing subsequently, so as to provide a basis for statistical consideration. The series of 84 cases appears also to show a smaller ratio of suppurative ear conditions in the sulfanilamide group, nevertheless, it is emphasized that definite conclusions are unwarranted on the basis of a small series.



It is pointed out that sulfanilamide does not displace antistreptococcus serum for toxemic cases, and in severe cases par-taking of both the toxic and septic phases combined treatment is indicated, the literature supporting this with experimental evidence. For the sick patient, it is justifiable, under proper safeguards, to incur the risk of serum reaction or drug intolerance. It is unjustifiable, however, to apply routine treatment without thoughtful consideration of the individual case. In very mild cases to apply therapy that may cause harm goes counter to the old medical dictum *Primum non nocere*.

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### Discussion

Dr William J Orr, Buffalo, New York—I feel at this time and in this locality it is practically impossible to evaluate definitely the effectiveness of sulfanilamide in the treatment of scarlet fever. Dr Silverman's excellent critical review of the subject clearly points out many of the obstacles that are encountered.

During the past decade the clinical manifestations of scarlet fever have been so mild that practically all studies, not only in the treatment but also in the prevention of the disease, have been somewhat inconclusive.

The results obtained from the use of antistreptococcus serum in the treatment and the Dick toxin in the prevention of the disease are still being debated. Therefore, we should not feel too discouraged if the effectiveness of sulfanilamide as a therapeutic agent is still in doubt. The first mentioned procedures have been in use for over ten years, while the latter for only two or three years.

Scarlet fever and its clinical manifestations have been so mild that it has been impossible to report a controlled series of cases treated with sulfanilamide, so as to be able to include a sufficiently large group of moderately severe and severe cases to determine definitely the effect of the drug on the disease.

As the result of what has been published to date most of us share the impression that sulfanilamide is not as effective in the treatment of scarlet fever as it is in other types of infection due to streptococcus, erysipelas for example.

Until a larger amount of data are accumulated so that the toxic or severe types of the disease are in sufficient numbers to be of statistical significance sulfanilamide should not be considered as totally inefficient.

At the present time, the best course to pursue in the management of the treatment of moderately severe or severe cases of scarlet fever should be the judicious use of serum and sulfanilamide.

Dr George R. Murphy, Elmira, New York—Dr Silverman's paper is timely and merits consideration. He shows clearly a sense of balance and a desire to keep his feet on the ground. He lauds the worth of sulfanilamide but warns against its dangers especially when used with overenthusiasm. He also has shown that one must be prepared to detoxify with serum, and to use serum and sulfanilamide as adjuncts to each other. In still other cases, perhaps one should consider these two agents as synergists in the treatment of a specific case—for he has brought out the need for individualization of therapy.

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Our clinical impression has been that sulfanilamide has definitely reduced the incidence of

suppurative types of complications arising in the course of this disease. We are well aware as Dr Silverman states that the disease is so variable that one cannot be too dogmatic in his conclusions about therapy, and also that one must have a large number of carefully controlled cases before arriving at very definite conclusions. However, as long as scarlet fever is a disease of the streptococcus family it seems to us not only justifiable but logical that this valuable drug should be used, but with intelligent reservations.

I feel that Dr Silverman's paper has covered the ground adequately, and that in the light of present conditions his conclusions are sound.

### THE 'SALESLADY' IN THE OUTER OFFICE

The physician is quite likely to be blissfully ignorant of the importance of a courteous pleasant saleslady" in the outer office, unconscious of the fact that the psychologic reaction of his patients to the office environment may contribute to a favorable or an unfavorable attitude toward himself remarks Stanley R. Mauck in the *Ohio State Medical Journal*. Mr Mauck is executive secretary of the Columbus Academy of Medicine and Director of the Columbus Bureau of Medical Economics. Previously he operated a private professional management service for physicians. He goes on to say that a calm, intelligent tactful secretary, or office assistant, has set the stage in many instances for a successful career. The wrong kind of personnel may contribute to the opposite result. The art of healing, after all, contains many elements of salesmanship, and upon the physician's assistant rests part of the responsibility for the successful consummation of the patient-physician relationship.

Among the secretary's duties we would like to emphasize the importance of telephone calls. Many patients have been repelled or drawn to the physician's office as a result of the initial telephone conversation. A pleasing telephone personality is a great asset in any physician's office. Complete information about the party calling the nature of the inquiry and its importance with reference to immediate action by the physician can be easily elicited if the calls are diplomatically handled. When the physician is out, the secretary can calm the impatience and disappointment of the patient by tactful advice as to when the physician will be available or under

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# TUBERCULOSIS IN STUDENT NURSES

LEOPOLD BRAHDY, M D , New York City

**W**HETHER a disease belongs in the category of an occupational hazard is determined by a comparison of (a) its incidence among those engaged in one particular occupation with (b) its incidence among similar groups in other occupations. Such a comparison is difficult when the disease under consideration is common among all groups of people and exhibits wide variation according to age, sex, and many other factors. Herein I shall first present a basis for determining whether contact with tuberculous patients is a threat to the health and life of student nurses and then examine the available data.

In years past, when the physician had to rely on a stethoscope and his own acumen in diagnosing tuberculosis, there was a saying that nurses did not become infected with the disease. Williams, in 1878, reported no case of tuberculosis in twenty years among the attendants of the Brompton Hospital for Consumptives.<sup>10</sup> At that time, however, nurses had no technical schooling. Recruited from the ranks of widows and older women, they constituted a miscellaneous and unsupervised group who had gained their skill through practical experience.

Today hospitals play an ever growing part in medical care and the role of nurse has passed from "neighbor women" to a specialized group trained during early maturity within the hospitals. Many hospitals have mandatory complete medical examinations of the nursing staff, and these examinations have established that while the incidence of tuberculosis among graduate nurses is low,<sup>13</sup> among students it is apparently high. In evaluating this observation the crucial question is not how much tuberculosis exists in this group, but is there *more* tuberculosis among these students than among

comparable groups in other occupations.

The first problem is a consideration of how much tuberculosis exists among women of the age group of these student nurses, namely, 18-25. Although our first interest is morbidity, a study of mortality will give us important and more reliable information. Some statistics are recorded for the 20-30 age group, others for 20-25, we must use what is available.

Tuberculosis is the chief cause of death, and it accounts for 29 per cent of *all* the deaths that occur among *women* between 20-25 years of age (Fig 1A). I know of no reasons for expecting that the young women merely because they *choose* nursing as a profession will die of causes different from young women in general who are overtaken by an early death. We therefore *expect* that 29 per cent of all the deaths of student nurses in hospitals in New York City will be due to pulmonary tuberculosis.

It may sound alarming if we are told that the percentage of deaths from pulmonary tuberculosis is 40 per cent higher in some particular group of women than in men of the same age, but a comparison of A and B (Fig 1) will show that this is exactly what is to be expected for *any* group of women. Even more impressive is the statement that among student nurses the percentage of deaths due to pulmonary tuberculosis is three and one half times as high as that of adult population in general. Fig 1 shows that unless a course in nurses' training somehow increases immunity, this will be the case even though there is no tuberculosis hazard whatever in the nurses' occupation—that these facts exist because student nurses are women and are young. In other words, there is no evidence of

# CAUSES OF DEATH - NEW YORK CITY FIVE YEAR PERIOD 1933-1937

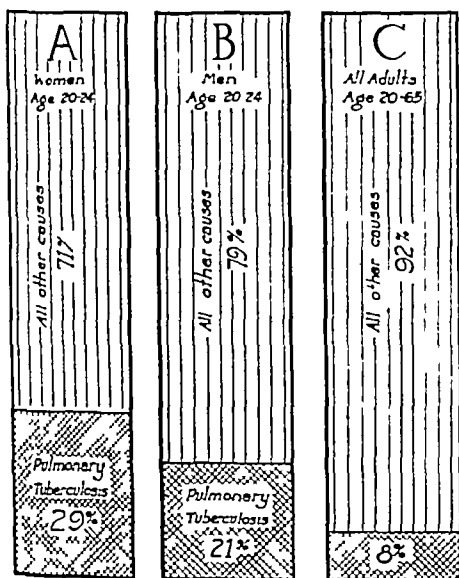


FIG 1 When a woman between 20 and 25 dies the chances are nearly three to one that the cause of death is pulmonary tuberculosis

occupational hazard unless we find that more than 29 per cent of the deaths among student nurses are due to pulmonary tuberculosis

In the previous paragraph I have discussed the *percentage* of all deaths occurring between 20 and 25 years of age that are due to tuberculosis. Fig 2 shows us that the absolute number of deaths from pulmonary tuberculosis among women reaches a maximum in this same age range, making a peak far above the number of pulmonary tuberculosis deaths in any other group of women. The graph demonstrates that among women the higher the age the less probability of deaths from pulmonary tuberculosis. This explains, in part, the old dictum that "nurses do not get tuberculosis," because at the time that this idea prevailed, the nursing profession comprised an older group of women than it does today when students enter the training schools in their late teens. After 40 years of age, the mortality from pulmonary tuberculosis in females is

# PULMONARY TUBERCULOSIS DEATH RATES FEMALES NEW YORK CITY 1920, 1933 AND 1937

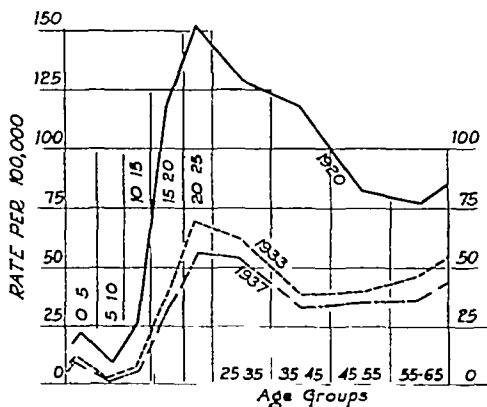


FIG 2 The number of deaths from pulmonary tuberculosis is greater at 20-25 years than at any other age among women

two-thirds of that within the age group 20-25 (Fig 3) and the number of cases is one-third (Fig 2), for higher ages the decrease is still more striking. Consequently, if we compare the pulmonary tuberculosis of student nurses or any other group 18-25 years of age with that of groups containing appreciable numbers of older women, the 18-25 age group will show a higher incidence of pulmonary tuberculosis.

If there is a hazard from tuberculosis in an occupation, then the tuberculosis death rate in that group must increase. The tuberculosis death rate among women of the same age group as our student nurses is appallingly high. All institutions and industries employing young women must be prepared for this tragic situation. In reviewing reports, besides the fact that our age group has always had a higher mortality from tuberculosis than any other group of women, we must also bear in mind that twenty years ago the mortality rate at the ages 20-25 was 152 per 100,000 (Fig 3) and prior to that, it was even higher. In 1937 the mortality rate was only 56. The fact that nurses of twenty or thirty years ago had a higher mortality than young women generally today is no evidence of occupational hazard. It indicates solely

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comparable groups in other occupations.

The first problem is a consideration of how much tuberculosis exists among women of the age group of these student nurses, namely, 18-25. Although our first interest is morbidity, a study of mortality will give us important and more reliable information. Some statistics are recorded for the 20-30 age group, others for 20-25, we must use what is available.

Tuberculosis is the chief cause of death, and it accounts for 29 per cent of *all* the deaths that occur among *women* between 20-25 years of age (Fig 1A). I know of no reasons for expecting that the young women merely because they *choose* nursing as a profession will die of causes different from young women in general who are overtaken by an early death. We therefore *expect* that 29 per cent of all the deaths of student nurses in hospitals in New York City will be due to pulmonary tuberculosis.

It may sound alarming if we are told that the percentage of deaths from pulmonary tuberculosis is 40 per cent higher in some particular group of women than in men of the same age, but a comparison of A and B (Fig 1) will show that this is exactly what is to be expected for *any* group of women. Even more impressive is the statement that among student nurses the percentage of deaths due to pulmonary tuberculosis is three and one half times as high as that of adult population in general. Fig 1 shows that unless a course in nurses' training somehow increases immunity, this will be the case even though there is no tuberculosis hazard *whatever* in the nurses' occupation—that these facts exist because student nurses are women and are young. In other words, there is no evidence of

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Syracuse, April 25, 1939*

Not many groups have data as to the number of cases of tuberculosis. One such group comprises the employees of the New York Telephone Company, which maintains a diagnostic service including x-rays of the chest whenever there is any clinical indication. No pre-employment or periodic x-ray examination is made. Among the female employees between 20 and 30 years of age, the incidence of pulmonary tuberculosis has been found to be 0.9 per 1,000.<sup>8</sup> The question for us to decide is whether this represents a reasonable basis of comparison with the incidence among pupil nurses. Can we properly state that if we find an incidence much in excess of 0.9 in the training schools that a tuberculosis hazard exists? Before this question can be answered, the efficiency of the case-finding procedure which established a morbidity of 0.9 among the telephone company employees must be compared with the efficiency of that used to determine morbidity among nurses.

The telephone company has no pre-employment nor periodic x-ray examinations. Nurses have both. It must be pointed out that while pre-employment x-ray examinations of the chest *reduce* the incidence of morbidity among an employed group where this examination is made, periodic examination *after* employment will certainly raise the reported morbidity. The extent of the increase or decrease which these two types of examination may cause in the reported morbidity of an employed group depends upon the type and thoroughness of the x-ray technic. It may also be influenced by the interpretation placed upon the x-ray findings—a mere suggestion of a shadow may mean refusal of employment or it may mean employment under observation while in some cases the candidate may be passed without question.

Where periodic x-ray examinations are used, many cases are found that ordinarily run their course without any clinical symptoms whatsoever, because "a large proportion of minimal cases re-

main minimal, and many of them do so in spite of violation of the standard rules of treatment" (Telford).<sup>17</sup> A report by Myers, Ch'iu, and Streukens<sup>12</sup> is a recent illustration of this. In a series of 26 students who showed signs of pulmonary tuberculosis by x-ray, 3 had erythema nodosum, and 1 an elevation of temperature for a few weeks. It is unlikely that these 4 would have been found without the periodic x-ray examination and the other 22 would *certainly* have gone undetected because they had no clinical symptoms whatever. J. A. Miller<sup>9</sup> speaking of lesions discovered by roentgenogram, says "In the great majority of cases these lesions are latent and innocuous and will always remain so under ordinary conditions of life." Such cases are the explanation of Stiehm's<sup>16</sup> at first seemingly incredible statement that in fourteen years at the University of Wisconsin, with no case finding by x-ray, an average of 10 cases of pulmonary tuberculosis per year were discovered. During the first school year that periodic x-ray examinations were used, a total of 43 cases was found. This is an increase of 430 per cent over the fourteen-year average.

In view of these experiences one may predict a higher reported incidence of tuberculosis among nurses than among the telephone company employees, because of the difference in case-finding method. This group, therefore, cannot be compared with student nurses. We should seek as a basis of comparison a group that has had periodic x-ray examinations. However, it is rare to find any group of young women outside of hospitals who have periodic x-ray examinations. One such group, however, is that of the clerical employees of the Metropolitan Life Insurance Company Home Office, reported by Fellows<sup>2</sup> in 1934. These women all had pre-employment x-ray examinations and subsequent annual periodic re-examinations, mostly by fluoroscopy and a few by x-ray film. The incidence of pulmonary tuberculosis for the age group 20-30 was found to be 4.3 per 1,000, for ages 25-29



*PULMONARY TUBERCULOSIS*  
*NUMBER OF DEATHS*  
*NEW YORK CITY 1933-1937, INC.*

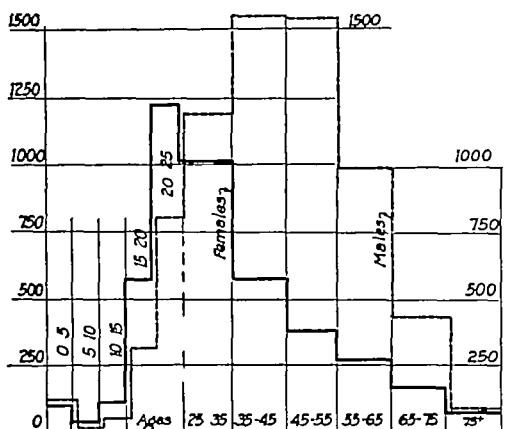


FIG. 3 The morbidity from pulmonary tuberculosis was much greater in past decades, but today, as in the past, the greatest number of cases among women is in the 20- to 25-year age group

that the mortality has declined in the last few decades. If 1,000 women students began a three-year course in domestic science on January 1, 1930, and you were informed that 4 of these died of tuberculosis within two years of graduation and 3 more died since, what would be your first reaction? If you examine the mortality statistics you will see that this is just what one may expect today. For a group of 1,000 students who began training in 1910 one expects to find that about 20 died of tuberculosis within seven years after graduation. These findings would hold for housewives, student nurses, or any other group of the same age. Having established a base line, let us examine such meager figures as are available.

Among 1,800 students nurses in the municipal hospitals of New York, part or all of whose training period fell between September, 1935, and September, 1938, there have been no tuberculosis deaths. Shipman and Davis<sup>15</sup> reported 1 death in 1,240 nurses observed from one to nine years, Myers,<sup>11</sup> 2 in 215 students enrolled between 1929 and 1934 and observed until 1937, and Jones,<sup>6</sup> 5 in about 1,400

nurses observed for five years. Amberson and Riggins<sup>1</sup> report no deaths among 492 nurses (about 807 life years). Other writers discuss morbidity without discussing mortality. We may assume that if there were any deaths at all in the series reported by these writers the number was insignificant, so that mortality, the most reliable index, does not indicate any serious occupational hazard.

I have omitted one author from the above statement, namely, Heimbeck,<sup>5</sup> of Norway, whose observations began in 1920. He reports 14 deaths among nurses in 5,364 life observation years, a rate of 240 per 100,000, 10 of these 14 deaths occurred among 284 student nurses whose tuberculin test was negative on entering training. No such mortality is reported anywhere else in the literature, and certainly no such mortality exists in any American institution of today. Regardless of whether the figures correspond to our experience in this country, Heimbeck has made a great contribution in demonstrating that tuberculin-negative and tuberculin-positive students are two completely distinct groups in relation to the effect of tuberculosis exposure. It is this distinction that will be the basis for the solution of the problem of tuberculosis in nurses. In the municipal hospital the incidence of lung lesions among student nurses entering training with negative tuberculin tests was five times as common as among those tuberculin positive.

The question of occupational hazard has been investigated more often by morbidity studies than by studies of mortality. Morbidity statistics of tuberculosis are extremely difficult to compare, because standards determining a diagnosis of clinical tuberculosis or arrested tuberculosis or tuberculous infection change with each observer. In case of frank, well-developed tuberculosis, the comparison is simple, but we are dealing with early lesions. Recognizing this great difficulty, let us see if we can estimate the tuberculosis morbidity expectancy among women between 18 and 25 in New York City.

It is generally supposed that most of these primary infections take place in the lung. We have no way of demonstrating this except that in about 15 per cent of positive reactors, the primary tubercle in the lung with the surrounding tissue reaction casts a shadow on the x-ray film. This shadow may persist for months or years but eventually disappears, leaving a small nodule or fibrotic strand. These transient shadows of primary infection are difficult and at times impossible to distinguish from lesions which will progress and give symptoms. It follows that where there is an appreciable percentage of individuals who acquire allergy while under observation, the number of cases classed as pulmonary tuberculosis will be larger, but how much larger no one can say with certainty. That the primary lesion in the lung is *invariably* transient and uninfluenced by therapy, is not unanimously accepted, what is certain is that where you have many tuberculin-negative individuals you will find many of these primary lung lesions.

Though not quite of the same social economic level nor drawn from the same geographic communities, the most similar group to nurses is college students. The incidence of negative reactors in this group averages 35 per cent compared to about 50 per cent among the New York City student nurses. Among young women in colleges with periodic x-ray examinations for case finding, we find an incidence of 75 per 1,000.\*

Geer,<sup>4</sup> after stating that he finds a high incidence rate at Ancker Hospital, says "Gordon and Cashman, Norris and Landis, Ross, and others have expressed the belief that tuberculosis does not develop among nurses, doctors, and other employees who are working in tuberculosis institutions, but this is happening at Ancker Hospital, and it is stretching one's credulity too far to assume that in this respect Ancker Hospital is unique among American institutions."

The point is well taken. There is nothing different going on at one institution reporting a low tuberculosis inci-

dence and at another reporting a high incidence. What is happening is that each institution uses a different method of case finding or does no case finding at all, and each observer has his own standards of what candidates to exclude on first x-ray and what constitutes clinical pulmonary tuberculosis on subsequent examination. For example, Geer<sup>4</sup> includes pleural effusion in his reported series, so that his incidence is not comparable with most statistics from which simple effusion is generally omitted. Among his cases he reports the following:

*Case 4*—Aged 21, entered training in September, 1929. Mother died of pulmonary tuberculosis in 1926. There was no reaction to 1 mg. of O.T. Physical examination was negative. Enrollment x-ray: small parenchymatous lesion in apex of right lung. Admitted to hospital in January, 1930 (four months after enrollment), because of loss of weight and fever in the afternoon. X-ray indications of tuberculosis increased, 3 plus to 0 1 mg. O.T.

It would never occur to me to include such a case of pre-existing lesion in a report of tuberculosis arising in the course of training. If we include such cases we must not compare the incidence with institutions that exclude these from their reports.

With more careful study and improved x-ray technic, I assume we shall find still more cases that we may class as clinical, secondary or primary, or arrested or healed, according to our standards. If we retest the negative tuberculin reactors and take more frequent films after they become allergic, we shall certainly find a much larger number of primary lesions. If we do, we must compare our incidence of cases found with other groups having similar, careful study and improved technic for case finding.

We must turn from the questions of morbidity, mortality, and positive x-ray films to consideration of the effect of primary infection in the adult. Most primary infections give no signs and no symptoms during any part of their course. We know of their presence in 85 per cent of cases solely by doing allergy tests. In the other 15 per cent there are, in

it was 6.1 per thousand. The peak in this group occurs a few years later than in most reports.

The combined effect of pre-employment examinations and case finding by annual fluoroscopic or x-ray examination is well shown by comparing the number of cases found among the insurance company employees and those found among the telephone company employees with no pre-employment x-ray of the chest and no periodic x-rays. The telephone employees do have an efficient diagnostic service that includes chest x-rays wherever there is the slightest clinical indication. Here we found a reported incidence of less than 1 in 1,000 for the age group 20-30. In other words, in 2 groups of women as nearly similar as can be obtained, both having good diagnostic service, the reported morbidity of tuberculosis is 475 per cent higher in the group given pre-employment and periodic x-ray examinations than it is in the group where no such examinations are made. The similarity to the 430 per cent increase in Stiehm's<sup>16</sup> series is no doubt a curiosity, but one that drives home the thesis of this paper, viz., the incidence of tuberculosis varies more with the method of case finding than all other factors of age, sex, and occupation put together.

If we were unaware of the clerical nature of the work done by the insurance company employees and had only these published statistics to go on, we could easily persuade ourselves that their occupation involves considerable hazard! In a large department store in New York City pulmonary tuberculosis among women, three-fourths of whom were under 30, was found to be 5.4 per 1,000 though only 1.6 were active. Less than half had periodic x-ray examinations. We, therefore, should expect *no lower* morbidity than 5 or 6 per 1,000 among student nurses.

The question for us to decide is "Should we expect a higher morbidity?" Naturally, we are now on guard as to the methods of case finding. Pupil nurses in municipal hospitals are examined by means of x-rays twice a year. Amberson

and Riggins<sup>1</sup> say "Tiny pulmonary lesions may appear and recede to insignificant dimensions within a year, and a semiannual roentgenogram will occasionally reveal one of these which would be missed by an annual fluoroscopy." This may raise our incidence but to what extent no one will know until a similar group of young women is x-rayed at the same intervals. We cannot guess how much higher the incidence would have been among the insurance company clerical employees if they had been x-rayed twice instead of only once a year, or if the department store employees had all been x-rayed, any more than any physician could possibly guess that an annual x-ray examination would uncover nearly five times as many cases of tuberculosis as the use of complete clinical facilities, exclusive of routine annual x-rays. All we may safely do is guess that the number of reported cases would be somewhat higher.

Another factor that may affect our morbidity comparison lies in the difficulty of differentiating between transient, primary infection, and an actively progressing lesion. A large proportion of the New York City pupil nurses come from small towns, while most clerical employees are residents of the city or suburbs. Consequently, among these nurses there is a much higher incidence of negative tuberculin reactors than among the insurance company employees. Mere residence in a crowded city would cause many of these negative reactors to become positive. Amberson and Riggins<sup>1</sup> in a tuberculin test in the largest of the five municipal hospital training schools included in the scope of this paper, found 48 per cent negative on entrance. The majority of these gave a positive reaction before the end of the three-year training course. Reports indicate that even in smaller cities, most of those who begin the nursing course with a negative tuberculin reaction acquire a primary infection as shown by allergy tests before graduation. Myers<sup>12</sup> reports about one-fourth positive on enrollment and more than 90 per cent positive on graduation.

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addition, lung shadows on x-ray films. The assertion that tuberculosis is an industrial disease was originally based not on a greater incidence of clinical tuberculosis but on the fact that, of those who had a negative reaction on enrollment, a much larger proportion of pupil nurses acquired the primary infection than students in other professional schools or colleges.

When student nurses change from negative tuberculin to positive, though they are in no sense ill, they have acquired the potentiality of developing clinical tuberculosis. The overwhelming majority of mankind in the course of ordinary life activity acquires tuberculin allergy. This usually happens in childhood, but in the last two decades an increasing number of children do not acquire the primary infection. The question, whether a nurse who acquires this primary infection at the age of 20, rather than in her thirties, is more likely to develop clinical tuberculosis in later life, is one that cannot be answered with any finality. There is always the possibility that any nurse who in later life develops clinical tuberculosis would never have acquired her primary infection at all if she had not been a nurse in a hospital, she might have escaped that hazard.

Surveys of graduate nurses yield no greater number of positive x-ray findings than any other group of women. In x-raying 591 candidates (a younger group) for enrollment for nurses' training, Amberson and Riggins found 7, or 1.2 per cent, with pulmonary tuberculosis, this did not include calcified deposits in the parenchyma or tracheobronchial lymph nodes. Among the 5,000 graduate nurses in the municipal hospitals of New York City, the incidence is less than 0.5 per 1,000 per annum. Every other survey and all hospital experience show about this same incidence in graduate nurses, indicating that there is no more tuberculosis among graduate nurses than among other women. If this is correct, other women acquire that same hazard regardless of what occupation they follow.

We have then ascertained that the morbidity in training schools with semi-annual chest x-rays may not be compared with morbidity of groups who do not have such periodic examination. The incidence of tuberculosis found in other groups will vary from 0.9 to 7.5 for each thousand observation years, depending on the thoroughness and frequency of the examinations.

In five of the seven nurses' training schools connected with the municipal hospitals of the City of New York, there were 1,800 pupils in training for periods varying from a few months to three years between September, 1935, and September, 1938. Twenty cases of pulmonary parenchymal tuberculosis were found by periodic examinations of girls whose first x-rays showed no lesions or only a primary complex. I have not included 5 cases of pleurisy with effusion if they have never (before or after) developed a parenchymal lesion. Such cases are not included in the insurance company or telephone company statistics or most other reports of pulmonary tuberculosis. This gives an annual incidence of 6.9 per 1,000, which is 50 per cent higher than that of the clerical employees of the insurance company of the same age and 10 per cent higher than the clerks 25-29 years of age.

Amberson and Riggins in Bellevue Training School alone, in five years, 1931-1936, found 6 pulmonary lesions, 1 tuberculous spondylitis, and 1 pleurisy (serofibrinous). The 6 parenchymal lesions give an annual incidence of 7.4 per 1,000.

The numbers given in reports on student nurses are too small for any but temporary conclusions. Can we conclude that more pulmonary tuberculosis is present among these student nurses (reported 6.9 per 1,000) than among the clerks of the insurance company (reported 4.3 for 20-30 and 6.1 for 25-30 age group)? Or does this increase in reported incidence bear a similar relation to differences in examination methods, which is responsible for the increase of 470 per cent over the telephone company when

compared with the insurance company and due to the difference in examination methods between these two companies? Is it analogous to the 600 per cent difference between the telephone company and a department store? How much of this 30 or 50 per cent increase is due to finding the transient, benign shadows of primary tuberculosis in the lungs? Why do we find reports of greater incidence (7.5) among college students than among nurses?

I have not attempted to answer these questions but have limited this paper to presenting data for the purpose of indicating that the answers must be made with care. Hasty conclusions have been published. They are likely to lead us to false generalizations on the epidemiology of tuberculosis with disastrous effects on progress in prevention and in therapy. The conclusion we may draw is that comparison of the nursing group as a whole to other groups does not indicate that tuberculosis is an occupational disease. Before we may make any positive generalizations from this negative statement we must divide nurses into those with primary infections (tuberculin positive) and those without primary infections (tuberculin negative). Because practically every graduate nurse is tuberculin positive, our studies must concentrate on the student nurses. We know that tuberculin-negative student nurses almost all acquire the primary infection before the end of the three-year training period. The indications are that among those students originally tuberculin positive the incidence of lung lesions is far less than the expectancy at that age and for tuberculin negative the incidence is greater than the expectancy.

### Summary

1 The percentage of all deaths due to pulmonary tuberculosis in the age group in which student nurses belong is higher than in any other age sex group (Fig 1)

2 The number of deaths due to pulmonary tuberculosis is greater at this age than at any other (Fig 2)

3 The morbidity of pulmonary tuberculosis is higher at this age than at any age among women (Fig 3)

4 Periodic x-ray examinations increase the number of pulmonary lesions found among young adults by as much as 475 per cent

5 Nurses' training school classes contain a large number of girls from small towns who are tuberculin negative, such a group will show a number of cases of lung shadows of primary tuberculosis which would never have been known except for the routine x-ray films. These shadows are not usually clinical tuberculosis, but do swell the *reported* morbidity for the group

### Conclusion

Every study of tuberculosis among nurses must take into consideration (1) the difference between tuberculin-negative and tuberculin-positive individuals, (2) the statistics on tuberculosis morbidity and mortality which serve as a basis for comparisons

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When the doctor told McTavish that his wife's tonsils should have been removed when she was

a little girl, he sent the bill to his father-in-law —  
*Illinois M. J.*

# THE SPASMOGENIC TENDENCY AND ITS RELATION TO THE EYES

ROBERT K LAMBERT, M D , New York City

**A** GREAT many patients come to the ophthalmologist for disturbances that do not lend themselves to strictly pathologic analysis. These ocular disturbances manifest themselves by varying types and degrees of pain, discomfort, and interference with function. In the absence of any organic disease most of the pain and distress arise in the smooth muscles of the eyes. It is frequently difficult to draw the line between so-called "asthenopia" and hypertonicity of the accommodative mechanism. The patient who has "weak eyes" and is incapable of sustained ocular effort, generally experiences pain, burning, or some type of discomfort after a certain amount of use. These symptoms, in the absence of pathologic changes, may be due to compensatory muscular efforts, necessary for some particular reason, and are avoided by not allowing the eye muscles more than a low threshold of work. Identical symptoms may be produced in uncorrected ametropic eyes working for short periods of time and emmetropic eyes doing work under adverse conditions or for longer periods of time.

Of course, a great many local factors exist, and it is the aim of the ophthalmologist to cure as many patients as he can by the correction of refractive errors and other relatively simple measures. Fortunately in a large percentage of instances, particularly ametropia, these measures are effective. Furthermore, from time to time more mechanical defects are disclosed, such as differences in image size, enabling the ophthalmologist to include more patients in the group he can assist by optical means.

After many attempts to correct local causes have been made, there still remain patients whose accommodative mechanism

gives evidence of violent response to minimal stimuli, or in other words, who have insufficient anatomic basis for their ocular disturbances. This group appears to have a tendency toward spasm of the smooth musculature of the eye.

It has long been an established fact that certain individuals are subject to various types of smooth muscle spasm. The pathophysiology of tonic, cramplike, smooth muscle contractions, whether in a hollow viscus, blood vessel, or the iris and ciliary body, follows certain patterns and responds to certain forms of therapy. The bronchioles, bladder mechanism, and all parts of the digestive tract are common sites of smooth muscle spasm. Certain disturbances such as coronary disease and essential hypertension are still of questionable nature, although there is reason to believe that the underlying nature of the condition is smooth muscle spasm of the vascular system.

## General Aspects

Let us first consider the general aspects of persons who have "the spasmogenic aptitude" of Houston, after which we can consider the factors that predispose toward ocular spasm in particular.

Certain types of individuals apparently are subject to smooth muscle spasm. There are (1) sensitive, high-strung people in particular environmental difficulty, such as highly competitive or overactive work, (2) psychoneurotics, (3) individuals temporarily depressed through fatigue or habits injurious to them, (4) allergic or drug-sensitive individuals.

There is a very difficult line to be drawn between sensitive individuals confronted by a difficult or highly competitive environment so common today and psycho

neurotics who are constitutionally unable to face the realities of life. Houston has pointed out that oriental races which face their problems, either objective or subjective, with a calm placid acceptance, are practically never the victims of smooth muscle spasm. They have neuroses, but the physical manifestations are differently expressed. Essential hypertension and other manifestations of spasm are virtually unknown to the Chinese. Conversely, our Western civilization, which places a premium on aggressively meeting and overcoming obstacles, is apt to produce individual reactions of a spastic nature. As I have said, it would not be difficult to cite numerous instances from general medicine, such as cardio-spasm, psychogenic asthma, and spastic constipation, but enlarging upon this subject would take us too far afield.

The philosophic implications of these relationships, while being fascinating to a degree, are not particularly relevant to this presentation. The relationship of fatigue or weakness to spasm is that of a compensatory effort that overshoots the mark and produces a cramplike response. Allergic manifestations are notably twofold: changes in capillary permeability with edema, and smooth muscle spasm. One familiar example of the latter is asthma in individuals sensitive to inhalants.

I do not wish to be misunderstood, or to minimize in any way the importance of the local causes of asthenopia, whether the patient can be included in the foregoing groups or not. In most instances any tendency toward a persistence of smooth muscle spasm in the eyes can be averted by proper local therapy. Relieving a convergence insufficiency, an early presbyopia, or any of the manifold disturbances that result in eyestrain, will generally be enough to stop the symptoms.

The troubling cases, however, are those in which the symptoms are out of all proportion to the ocular causes, and persist after these causes have been corrected. In my experience it is most unusual to have persistent irritability of the

intrinsic eye muscles, without any local imperfection to direct the channels of reflex spasm toward the eye. While such cases do occur, generally the spasms are only manifested in the more vulnerable parts of the body. Most of the patients who have shown irritability of the intrinsic eye muscles have had a definite *locus minoris resistentiae* of the eyes, in addition to falling into one of the previously mentioned groups. These patients for the most part have had repeated refractions with many slightly different corrections and innumerable general examinations to find some particular cause for their inability to use their eyes with comfort. The syndrome presented is therefore as follows: the individual usually has some inherent eye defect or refractive error. He is unable to use his eyes normally despite the proper correction because of pain or discomfort, and there is an apparent hyperirritability of the ocular smooth muscles. A ciliary blush or a low-grade iritis may occur at any time. Measurable accommodative spasm, preceding a manifest myopia, may even be present. In addition there are generally parallel spastic symptoms, such as spastic constipation, in other parts of the body.

### Treatment

We can assume that in every case there has been a search for correctable local defects. Whether or not a patient has a "spasmodic aptitude" is of no special interest to the ophthalmologist if he can eliminate ocular distress by corrective lenses or orthoptic training.

Some patients, however, can never hope for perfect optical corrections. Their weak point is a residual anisometropic error, muscle imbalance, or other defect. Under ideal conditions these patients may function normally with full use of their eyes. If another factor arises, such as general fatigue, anxiety, or even the excessive use of tobacco, there is an effect upon the autonomic nervous system, and smooth muscle irritability may result. A local approach may be adequate for this type of patient. One must approach the



problem as though no anatomic defect were present at all. Great loss of time and effort can take place in these cases by overstressing the mechanical situation and by repeated examinations. This local overattention may even aggravate the tendency toward spasm. The basis of the trouble can frequently be disclosed by careful history taking.

The patient's habits must first be considered. Insufficient rest should of course be remedied. If the environment is such as to exert pressure on the individual, he should be taught, as far as one is able to teach relaxation, not to make pressure upon himself. The eyes should be used in a consciously relaxed manner and not with the peering and wrinkled brow indicative of intense concentration.

The effect of tobacco is marked in aggravating a spasmogenic tendency. The exact nature of the mechanism is in doubt, although the effects are beyond question. The recent work from the Mayo Clinic by Cusick and Herrell on the effect of tobacco on the retinal arterioles is of interest in this connection and may indicate a hypersensitivity in certain individuals. Strangely enough, alcohol is much less of an offender in this particular respect. It even may be helpful in relaxing the individual and providing an easier adjustment to his environment.

As said before, one of the characteristic allergic responses of the body is smooth muscle spasm, so it may be wise to eliminate common allergens from the diet of known allergic sufferers. Even allergic studies may be indicated.

The treatment of psychoneurotics must be worked out for each individual case. In not all of these is there a definite spastic tendency, some individuals showing simple anxiety over the use of their eyes or an overprotectiveness. This particular subject is of great importance clinically, and it is surprising how little attention it has received in the ophthalmologic literature. The only recent papers to my knowledge are those of C. W. Rutherford in 1932 and George Derby in 1930. In general it would seem wise for the ophthalmologist to avoid any ex-

tensive investigation of his patients along psychiatric lines. Such a procedure by one not properly trained for the work is apt to produce more harm than good. Recognition of the condition and perhaps encouragement and suggestion or substitution therapy are indicated, however. When the patient is sufficiently intelligent, proper psychotherapy in the hands of an expert is of inestimable value. It is interesting that in former days sea voyages were frequently ordered in cases with persistent eyestrain. One wonders to what extent this method worked by removing the patient's responsibilities and relieving his anxieties.

The use of antispasmodics is frequently effective. Tincture of belladonna by mouth seems a good drug for general use and may be tolerated in large doses. The best method is to give quantities up to the production of slight toxic effects, such as dryness of the mouth. I shall not deal extensively with the local use of mydratics as most ophthalmologists have in individual preferences. It is, however, more convenient and comfortable for the patient if he can maintain proper function of the eyes without resorting to cycloplegia or premature presbyopic corrections. Certain drugs combine the properties of both antispasmodic and sedative, and in certain cases, where anxiety or worry seems to be the chief factor in upsetting the patient's equilibrium, small doses of a simple sedative such as phenobarbital or chlorbutanol may be most helpful.

### Case Reports

*Case 1*—L. R., male, aged 45, physician engaged in active practice, was almost completely unable to read for more than a few minutes at a time because of severe headaches and eyestrain. The patient had acquired, in the course of several years, at least a dozen corrections for an anisometropic error. These corrections were given by competent ophthalmologists. His general health was good save for spastic constipation and a fissure in ano. The patient was a fairly heavy smoker, consuming many cigars and a pack of cigarettes a day. Very little change was made in the patient's correction but he was asked to eliminate

tobacco and use tincture of belladonna gtt's 10 three times a day. The function of his eyes began to improve within a few days. While this patient never can be expected to have a very high tolerance for sustained ocular effort, it is now possible for him to do an adequate amount of reading. By rest and the use of tincture of belladonna he can even abort attacks of pain and headache. Conversely, smoking particularly cigars, is almost invariably followed by a period of ocular discomfort.

*Case 2*—R. S., female, aged 38, high-strung, irritable housewife, had been wearing a low myopic correction with slight alterations for some years. She had had much difficulty in using her eyes at motion pictures and for reading and writing. The maximum amount of comfort was obtained several years previous by the use of bifocals with additional correction for near work. Despite this help, reading for more than a few minutes produced pain in the eyes and forced her to stop. The patient herself desisted from smoking several years ago as it disagreed with her. She was referred back to her family physician and put on tincture of belladonna gtt's 10 three times a day. Although she was greatly helped and could read, there were numerous neurotic manifestations in addition to her reading disability and it was thought wise to send her to a psychiatrist for study. Psychoanalysis was resorted to and marked improvement was obtained after the underlying neurotic factors in the case were understood. She is able now to use her eyes almost normally, without any excessive discomfort.

*Case 3*—N. D., female, aged 28, high-strung, hypersensitive secretary. Patient's symptoms dated back to ten years ago when she was struck by an automobile and suffered from shock. She had been wearing a low hyperopic correction previous to the accident. Shortly after the accident, the patient began to complain of headaches, constipation, digestive disorder, and discomfort when using her eyes for the ten days previous to the onset of her menstrual period. There was also a great deal of discomfort during the first twenty-four hours of menstruation. These symptoms have persisted to the present.

About one year ago, the discomfort when using her eyes became more marked and several slight changes were made in her correction.

During the ten days preceding menstruation the patient uses a plus 0.50 sphere added to her correction and tincture of belladonna gtt's 10 three times a day. The patient is symptom-free after menstruation ceases. She has been examined by a gynecologist who states that there

is no pelvic disorder responsible for her symptoms, so that the condition may perhaps be classified among the traumatic neuroses with conversion symptoms to various parts of her body. The condition, however, is not severe enough to warrant psychiatric treatment.

## Conclusion

It has long been recognized by ophthalmologists that measurable accommodative spasm associated with ocular discomfort and visual disturbance does exist. The recognition of subclinical and low-grade forms of this particular type of disordered function has not been so general. While it has also been well recognized that there are various forms of smooth muscle response in different parts of the body to anxiety, emotional disturbances, and various forms of allergy, this particular syndrome has not been so clearly defined in relation to the ocular mechanism.

Many factors are still poorly understood concerning smooth muscle spasm, and it is hoped that the psychosomatic approach will make treatment for this group more effective by the ophthalmologists. We need not limit ourselves in this respect to so-called "functional disturbances," for as Fremont-Smith says "Organs and tissues which are the site of disease are not immune to the physiological and biochemical effects of emotional conflict." There can be no doubt that the psychosomatic approach will be of fundamental importance to the future of medicine, as evidenced by Dunbar's comprehensive survey of the literature.

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## Discussion

Dr. Charles A. Perera, *New York City*—Dr. Lambert has reminded us that treatment of local symptoms without adequate study of the personality and organism of the patient as a whole may be to fail in our function as physicians.

With the modern emphasis on specialism in all fields of medicine and on the mechanistic approach to disease, the psychic component has often been overlooked or slighted. The essayist has touched upon an aspect of ophthalmology which is of immense clinical importance.

The role of the emotions upon the autonomic nervous system, and its resulting smooth muscle spasm of all types and gradations is being increasingly recognized in such diseases as essential hypertension, angina pectoris, bronchial asthma, cardiospasm, pylorospasm, spastic constipation, bladder disturbances, and glaucoma. Many patients are suffering from less well-defined pathologic states of psychogenic origin and also belong to the group possessing the "spasmogenic aptitude." The patients cited by Dr. Lambert have a lowered threshold of sensitivity, and react excessively to stimuli which do not ordinarily affect normal individuals.

Ocular symptoms in these patients are due to external causes focused upon an organ of psychically lowered resistance. Since the eyes play a predominate part in the individual's contact with the outside world, they are often affected in patients who have problems or conflicts which they cannot face or do not wish to meet. Fear of injuring the eyes or of losing eyesight is often productive of ocular complaints which are relieved when the fear is removed. Blepharospasm is frequently on a psychogenic basis, the patients with this disability being unwilling to face or open their eyes to a situation which they cannot handle or wish to avoid. Eye symptoms may develop from a desire to escape from an intolerable situation, even to the ultimate stage of hysterical amblyopia. Patients may use their ocular complaints to avoid work, emotionally elaborating upon a slight physical basis. Symptomatic therapy in these instances without psychotherapy may be ineffective or even harmful.

In dealing with the patient with a spasmogenic tendency, a complete history should be taken, and the examination should include a study of the sufferer as an individual, and not, as is too often the case, as an optical and ocular motor mechanism. The treatment of patients with photophobia, burning sensation in the eyes, difficulty in reading for more than a short time, and aching pains in and around the eyes, and with no uncorrected defects, should include correction of faulty habits of life, avoidance of fatigue and anxiety and other factors productive of smooth muscle spasm, the use of sedatives and antispasmodics, and the elimination of local irritation. Most of these patients have a local hyperemia and thickening of the conjunctiva,

and a surprising number are benefited by treatment with the copper sulfate stick applied to the palpebral conjunctiva of the lower lid and of the inner and outer portions of the upper lid, followed by copious irrigation with saline or boric solution. It is impossible to say how much the efficacy of this form of treatment depends upon suggestion and how much depends upon amelioration of the conjunctival sensitivity to minimal stimuli. Local treatment must be accompanied by a sympathetic handling of the patient's fears and worries.

I believe that the ophthalmologist, as well as other physicians, should be trained in the investigation of his psychoneurotic patients should collaborate with the family doctor, and, if need be, with the psychiatrist.

Dr. Lambert's paper has opened up for our study an interesting field which is more vast than we suspect, which includes many baffling problems, and which will lead to new conceptions in the realm of diagnosis and treatment in our specialty.

**Dr. Harold Van Lammers, Flushing, New York**—Dr. Lambert is to be congratulated, not so much in that he has brought us a classification of what we prefer to call "trouble cases," but that he has had the ability to keep these persons under his care long enough to obtain data of value.

I should like to confine my discussion to the type of headache which is a prominent part of this person's complaint. This headache is not quite the usual one registered by the astigmatic patient, or the one with muscle defect, or size image defect. It is a type that we are likely to overlook or assign to other causes, the most frequent being that of low activity glaucoma or sinus disease.

The typical headache starts off with discomfort of the eyes on application even after a few minutes. However, it quickly reaches its maximum so that the patient can continue his work despite the headache and it becomes no more intent. However, most of these persons so afflicted can no longer concentrate and with the discomfort, discontinue their reading. The intelligent patient, however, quickly correlates the intense distressing headache which he experiences on arising in the morning with his reading of the night before. This ache is over the eyes and the sides of the brow. At times, it may be knifelike and sharp and is described as "cutting flashes," and usually lasts but short periods and at intervals. However, the dull depressing ache continues until about noon when the head begins to clear and provided this person does no clerical work he again feels capable of intense effort. The pa-

tient soon learns, however, that he is not to use the eyes in the morning or the ache is prolonged

Several diagnostic observations may be noticed by this person. He soon learns that if he reads the night before he will have headaches in the morning. The same holds true for going to the movies. He knows also that if he goes to bed early and sleeps late he will have the headache on arising. He also knows that if he goes to bed late and gets up early his headache is less intense if at all. At no time does he have nausea unless it is coincidental from some other cause.

Needless to say many such persons applying for aid give as accurate a history as I have described. He is likely to lead the physician into believing that this ache is secondary to sinus infection or obstruction. However, this is easy to find out by regulating the use of the eyes from which source the headache is derived.

Over the weekend, this person usually does not have headaches. If Dr. Lambert has ever taken a sea voyage he certainly realizes that a good deal of his time must be spent in reading due to the lack of facilities for exercise or other occupations of interest. In my opinion, a land voyage is much to be preferred as distant gaze results in little discomfort.

To me it seems reasonable that this headache should come on in the morning. When a football player gets an acute traumatic myositis he often at the time does not realize the injury but when the thigh muscles begin to relax the following day he then has pain and discomfort. He knows that this pain can be eliminated by producing spasm of the muscle and all of us have seen players arising from the bench forcefully striking their thighs with their fists to produce muscle spasm eliminating the pain. The following day as the muscle relaxes, the pain is even then more intense. He requires complete rest rather than whipping the injured muscle to renewed activity to eliminate the complaint.

When does the patient with a tuberculous hip infection have pain? Not when the muscles of the hip are contracted but when they are relaxing so that often the worst pain is at night or at early morning. Dr. Lambert mentions spasm of the smooth muscles, but I wonder if striped muscles do not make themselves evident on relaxation also.

To successfully treat a troubled case of this kind, it is necessary to gain such confidence of your patient that he will remain continuously under your care. All defects must be corrected, and his life so regulated to permit him fifteen minutes of reading a day. In this way, this

person will not be overcome by the apparent necessities of life and can successfully cope with his or her environment.

Dr. Macy L. Lerner, Rochester, New York.—Dr. Lambert's paper has great value for us. He calls our attention to a certain group of patients who cannot be relieved by the most painstaking refraction and yet it is our problem to solve their difficulties. If we consider that most of our work is refraction and that a large number of patients with apparent refractive symptoms do not need glasses, a careful study of these problems is worth while.

I recall a lady asking me, "Doctor, don't you tire of examining for glasses all day long, doing the same thing over and over?" My reply, of course was that I do tire, but that every case is different, not in spheres and cylinders, but in the solution of each patient's problems.

You have to be some sort of a G man to learn which smooth muscle fibers in the body are the actual offenders, whether ciliary, genitil, intestinal or sexual. My feeling is that there must be a central station from which messages are relayed to these smooth muscle fibers. These patients belong to general medicine. The physician in charge should study these patients carefully, the ophthalmologist's task is advisory. To administer tincture of belladonna for the relief of symptoms appears to me to be only a part of the treatment. I became interested in the subject about eight years ago when I had the opportunity to read a paper on ocular neurosis. At that time I referred to the article by the late Dr. Derby of Boston which Dr. Lambert has mentioned. Since then my hobby has been to lecture once a year in our graduate course in Ophthalmology on a similar subject. The title I have preferred is "Refraction, a Medical Problem." It seems to me this broader term would include not only this group of spasmogenic cases but many other problems closely related to it. I believe a patient with spasmogenic tendency in the eyes deserves a study with particular attention to the ocular muscle balance. A very careful approach must also be made in taking not only the ocular history but the general history. If the patient finds the ophthalmologist sympathetic and willing to listen, a great deal can be learned which will help in the management of his problem.

I wonder whether the case cited by Dr. Lambert in which a patient obtained complete relief by taking tincture of belladonna and eliminating cigarettes may not have some other factors responsible for the symptoms. I note that the patient had a marked degree of anisometropia.

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# CAMP SANITATION

C. A. HOLMQUIST, Albany, New York

(Director, Division of Sanitation New York State Department of Health)

THE supervision over camps, although relatively new, is one of the major public health problems confronting state health departments today. The importance of the problem is indicated by the fact that in New York State alone there are approximately 3,000 camps occupied by from 2,000,000 to 3,000,000 persons a year and that a number of outbreaks of preventable disease occur in these camps each year.

New York was one of the first states to assume control over the sanitary condition of camps when in 1914 the newly established Public Health Council enacted Chapter V of the State Sanitary Code governing labor camps, there having been a number of outbreaks of water-borne disease attributed to the pollution of water supplies derived from watersheds occupied by such camps. At that time there were relatively few organized summer camps in the state and their supervision was not yet considered a serious problem. Consequently, Chapter V of the Sanitary Code was drawn up primarily to protect the public from unsanitary conditions arising from the operation of labor camps. This code prohibited any person from establishing or operating a labor camp without a permit from the local health officer and contained few regulations except those relating to the control of communicable diseases and the minimum distances which buildings of labor camps and more particularly sources of pollution may be maintained from lakes, ponds, streams, and sources of public water supply.

The urge to live outdoors and the rapid growth in automobile transportation enabling people to penetrate to the remotest parts of the country led to the establishment of numerous organized

summer camps for both children and adults and more recently the so-called "tourist" camps. Such organizations as the Boy Scouts, Girl Scouts, Y M C A, Y W C A, realizing the advantage from the standpoint of health, recreation, and character building of having children and young people live in the open under trained leadership for various lengths of time during the summer months established many summer camps throughout the country.

The inspection by this Department of some of the first summer camps established indicated the urgent need for the supervision over the sanitary conditions not only of labor camps but also of summer camps. Consequently, the Public Health Council on May 15, 1924, so amended Chapter V of the Sanitary Code as to apply to any camp or tract of land on which ten or more persons may camp, either free of charge or by the payment of a fee. In 1932 and again in 1935 the Sanitary Code relating to camps was so amended as to protect more adequately not only the public but more particularly the health of the campers.

In the last revision a camp was defined "to mean one or more temporary or permanent tents, buildings or structures, together with a tract of land pertaining thereto, established or maintained as living quarters for temporary occupancy by ten or more persons, including children, either free of charge or by the payment of a fee." This definition was designed to cover not only labor and summer camps but also most house-trailer camps and tourist camps having five or more cabins, assuming that each cabin could be occupied by two persons.

Our investigation of many of the summer camps established before the camp

*Read by invitation at the Annual Meeting of the Medical Society of the State of New York  
Syracuse April 25 1939*

Was he given the benefit of the latest ideas regarding the possible existence of aniseikonia? This itself would play a considerable part in his symptoms. Furthermore, there is a history of

fissure in ano and spastic constipation. If you have suffered from either of these you will appreciate that it may produce referred symptoms

## VENEREAL DISEASE QUACKERY GROWING

Venereal disease quackery is on the increase and today constitutes one of the major obstacles to the public health control of syphilis and gonorrhea, officers of the U S Public Health Service state in a nationwide N B C broadcast.

Drugstore "back counter prescribing" has increased substantially during the past several years. Many different "patent remedies"—produced both locally and on a national scale—are on the market and sold in large volume. There is indication that the sales curve has been rising during the past six or eight years.

Large numbers of unethical practitioners—"men's specialists," herbalists, mail-order experts—are active, although quack advertising has apparently decreased in volume.

More persons evidently are going to drugstores and quacks for diagnosis and treatment of venereal disease than are going to reputable physicians. Exploitation of persons who are, or think they are, sick with gonorrhea or syphilis runs into tens of millions of dollars annually.

These trends were reported in a survey conducted by the American Social Hygiene Association in cooperation with the U S Public Health Service ("Illegal and Unethical Practices in the Diagnosis and Treatment of Syphilis and Gonorrhea," by Mary S Edwards, statistician, and Paul M Kinsie, chief of field study, of the American Social Hygiene Association, published in the January, 1940, issue of *Venereal Disease Information* of the Public Health Service).

Personal interviews by trained investigators posing as "friends" of presumably infected persons were carried on in 1,151 drugstores in 30 cities in 26 states. Sixty-two per cent of the drugstores visited diagnosed the diseases and offered to sell remedies for alleged syphilis or gonorrhea, especially the latter. Thirty-one per cent did not attempt to diagnose, but stocked, and were willing to sell, bottled remedies, especially when asked for them by name. About half of those who sold remedies urged the inquirer to see a doctor. Only 7 per cent of the entire number refused to diagnose or sell remedies.

About 30 different preparations were found to be generally available as remedies throughout the nation. Only 3 or 4 were recognized drugs, the remainder consisting of completely worthless mixtures as far as any effect on syphilis or gonorrhea was concerned. Mixtures made from such ingredients as boric acid, berberin, glycerin etc., of only a few cents value are sold at prices ranging from \$1.00 to \$3.00 a bottle.

## GENIUS AND THE JITTERS

All great works in the world are done by neurotics, Dr Nolan D C Lewis, professor and executive officer of the Department of Psychiatry of the College of Physicians and Surgeons, Columbia University, told an audience at the American Institute, 60 East Forty-second Street, New York City, on January 9, as reported in the New York *Herald-Tribune*. Normal persons, those of exemplary conduct in every respect, he said, remain mediocrities.

"I'm not interested in normal people," Dr Lewis said, and then he related experiences with some famous neurotics who wanted to be cured of their neuroses but retain their genius.

"A very famous woman novelist came to consult me not long ago about her neurosis," related Dr Lewis. "I recognized her trouble and I told her I could cure her but that she would no longer write novels if I did. She of course, desired treatment, but I decided that it would be a pity to destroy a fine novelist and so I refused to cure her, and she is continuing to write fine novels. If I had cured her, all the mystery that she puts

into her novel-writing would have been destroyed."

Dr Lewis then told of his experience with a famous pianist. "He came to me and asked to be treated for his trouble. I warned him that I could cure him, but that he might never play the piano again. He begged me to go ahead and cure him. Well, I have cured him, but he is no longer a great artist of the piano. He is now a fine mathematician."

Dr Lewis related a final instance of a well known magazine illustrator who sought treatment for his neurotic difficulties. This painter was also cured of his neurosis, the physician said, but he lost his fine artistry with the brush and has now become one of the city's best known photographers.

"It is true," concluded Dr Lewis in reply to a question "that we know that neuroses produce works of genius, but we do not yet know how to produce these neuroses artificially, nor how to direct them and so create geniuses or works of genius."

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code was enacted showed that there was gross ignorance on the part of the owners of even the most elementary principles of camp sanitation. Some camps were located on low, flat ground, adjacent to mosquito-breeding swamps where proper drainage could not be provided. Little thought seemed to have been given in many instances to selecting sites with suitable exposure and the existence of trees. Some were located where no trees were available for shade and others in woods so dense as to almost entirely shut out the sunlight and prevent the free movement of air.

The most serious defects, however, were those relating to water supplies in the camps. Wells from which the camp water supplies were obtained were found to be located often in close proximity to cesspools and privies and in some cases the overflow from cesspools and septic tanks was discharged into lakes, ponds, and other bodies of water close to intakes of camp water supplies or adjacent bathing beaches.

It was not surprising that such conditions should exist in camps established before the Sanitary Code was enacted for the guidance of camp owners. Most camps are operated and occupied by persons residing in municipalities provided with public water supplies and sewerage and sewage-disposal systems under competent control. The average citizen in cities pays little or no attention to such conveniences but takes them for granted.

As indicated above the selection of a site that will best meet the sanitary and health requirements is of prime importance. Careful consideration should be given to natural drainage, proper amount of shade, suitable exposure, sufficient area to provide desirable isolation, and adequate facilities for satisfactory water supply and sewage disposal.

To find camp sites that will meet all of the above desirable requirements is no easy matter and since the limited funds available, especially to charitable organizations, often prevent the securing of desirable sites, it becomes necessary to

make the most of such sites as it may be possible to secure. If, however, all of the regulations of the Sanitary Code are complied with not only in the construction but also in equipment, personnel, and operation, most camps can be so maintained as to protect the health, safety, and welfare of the campers.

The present code relating to camps contains forty regulations which cover in considerable detail such matters as cleanliness, sleeping quarters, ventilation and fly proofing, fire protection, protection of food supplies, dishwashing, kitchen and dining-room equipment, garbage disposal, camp personnel, special supervision of camps for children, medical and nursing care, isolation of cases of communicable diseases, water supply, sewage disposal, privies, swimming pools, bathing beaches, etc. Owing to the limited time available for the presentation of this comprehensive subject it will be possible to cover briefly only the more important requirements directly affecting the health of the campers, namely, water supply, sewage disposal, medical and nursing care, milk, and overcrowding in sleeping quarters.

A large part of the code is devoted to water supply, sewage, and waste disposal and rightly so, inasmuch as defects in these facilities and the use of raw milk have been the major causes of outbreaks of disease in camps. Unless the soil of a camp site is of a suitable porous nature the providing of a water supply of safe sanitary quality and adequate quantity and a satisfactory system of sewage disposal becomes a very difficult engineering problem. In fact it usually offers more difficulties than providing these facilities for a municipality. A city or village generally has sufficient funds to enable it to go a considerable distance to secure adequate supply of water and, if necessary, to install and operate adequate and efficient water-purification plants. Municipal sewer systems can be installed and the sewage conveyed to isolated points for treatment and disposal. In the case of camps, however, the funds available are limited and it is

generally necessary to secure a water supply and dispose of the sewage on relatively small camp sites

The safest source of water for a camp is the well or spring so located, constructed, and protected as to prevent wastes produced on the premises or from adjacent areas gaining access to the supply. Water supplies from surface sources such as streams, lakes, or ponds should be used only if an adequate supply of satisfactory sanitary quality cannot be obtained from ground water sources.

Surface supplies are almost invariably subject to willful or accidental pollution and cannot be considered safe for human consumption without effective filtration or chlorination, or both. Such purification or treatment processes are relatively costly to install and maintain, and to be dependable should be operated under trained and competent supervision which is rarely available at camps. Under no condition should a water supply for a camp be derived from a stream or other body of water into which untreated sewage or even treated sewage effluent is discharged, inasmuch as the interruption of the chlorination of such a supply is liable to cause an outbreak of water-borne disease.

Too much emphasis cannot be placed upon the safe disposal of sewage and human excreta. The Sanitary Code provides that "no privy shall be located less than 100 feet from any kitchen, dining room, or other place where food is prepared or served," and that "no leaching privies, cesspools, subsurface tile drains, sand filters, or other units of sewage treatment works which are not watertight should be located on the direct line of drainage to nor closer than 200 feet from wells, springs, ponds, reservoirs, or streams used as sources of water supply for a camp, etc."

Another section of the code provides, however, that a privy if not located on a direct line of drainage may be as close as 100 feet from the source of the camp water supply, but that a privy when located between 100 to 200 feet from such source of supply shall be so constructed

as to provide watertight receptacles for the storage of excreta.

Unless the soil of the camp is of a suitable porous nature and the site sufficiently large to provide for subsurface methods of sewage disposal, the installation of water closets and water-carriage systems of sewage disposal are discouraged and sanitary privies recommended. Water-carriage systems are costly to construct and require constant, intelligent operation in order to prevent the creation of objectionable conditions through overflows or the pollution of bodies of water which may be used as sources of supply or for bathing. If such systems are provided they should be designed and installed by experienced engineers.

Another very important regulation of the code is that relating to medical and nursing care. Regulation 33 of the code stipulates that "there shall be adequate medical and nursing supervision and care at or available to all camps." Some camp owners believed that they complied with this provision of the code if they employed a so-called "practical" nurse and an undergraduate medical student. In order to clarify this situation, the State Commissioner of Health last year appointed a committee consisting of District State Health Officers and members of the staff in the Central Office to study and report on this problem. The report of this committee, submitted on June 27, 1938, contains the following statement which is considered a reasonable interpretation of the minimum requirements necessary to comply with Regulation 33 of Chapter VII of the Sanitary Code.

1. At all camps there shall be

(a) A definite arrangement by the camp management with a licensed physician to be on call at all times for medical service and to supervise all first-aid and nursing service in the camp.

(b) Someone, either the camp manager or an employee, in the camp at all times, who is especially trained in first-aid service, such training to be that given by the American Red Cross in the "Advanced" course in first aid or its equivalent.

(c) Standing orders issued by the physician

to the person responsible for first-aid service to be followed in the absence of the physician

(d) A telephone in camp or available within 10 minutes travel time from camp

(e) A first-aid cabinet which shall be kept at all times fully equipped. A stretcher kept near the above cabinet. A first-aid bag which shall also be kept fully equipped and available for emergencies distant from the cabinet

(f) Definite arrangements to provide for any needed isolation facilities

2 At all camps operated to care for children not physically normal or at which the total number of persons, including campers, employees, and administrators, is at any time greater than 75, there shall be employed a resident registered nurse

3 At all camps at which the total number of persons, including campers, employees, and administrators is never at any time greater than 75, there shall be definite arrangements to provide for the employment of a registered nurse in camp whenever such employment shall be advised by the physician, and when he so advises a registered nurse shall be employed

If the total number of persons ordinarily approximates 75, the camp management should be encouraged and urged to meet the standards indicated in paragraph 2

At camps where there is a resident physician, requirements 1 (b), 1 (c), 1 (d), and 2 need not be required, but requirement 3 shall apply to all camps where there is a resident physician

The "definite arrangement" above referred to, shall be described in detail in writing by the camp manager and available for the guidance of the person in charge in the absence of the manager. "Definite arrangements" for personal service should preferably be written contracts and in detail as to authority and responsibility of both parties

Regulation 15 of the Sanitary Code relating to camps provides that "only milk and cream secured from a dealer holding a permit under Chapter III of the Sanitary Code shall be used at a camp." Milk permits are issued by local health officers to milk dealers only if the production and handling of the milk and cream meet the requirements of the code. It is invariably recommended

that only pasteurized milk, preferably in bottles, be used at camps. Large milk dealers are now able to deliver pasteurized milk to camps located in the remotest parts of the state so that there is no valid reason why most camps should not be provided with safe pasteurized milk. Raw milk, no matter how carefully it is produced and handled cannot be considered as safe as pasteurized milk. Of the large number of milkborne epidemics that have occurred in this state during the past twenty years no epidemic has been definitely traced to the use of properly pasteurized milk.

Another condition that should be avoided is the overcrowding in sleeping quarters. Regulation 12 requires that "A separate bed or other sleeping place shall be provided for each person cared for. Such beds or sleeping places shall be separated by a distance of at least two feet. Dormitories, rooms, or tents used for sleeping quarters shall have not less than thirty (30) square feet of floor area for each occupant and shall be properly ventilated." (This regulation does not apply to cabins of tourist camps.) In order to provide additional protection in camps occupied by children we recommend head to foot arrangement of sleeping cots whenever sleeping quarters are restricted. Conscientious carrying out of this regulation and head to foot sleeping arrangement should minimize the danger of spreading respiratory diseases among the campers.

As indicated above, the Sanitary Code places the supervision over the sanitary condition of camps almost entirely under the jurisdiction of the local health officers. It provides that "No corporation, association, or person shall establish or construct, or shall maintain any camp to be occupied by ten or more persons without a permit from the local health officer" and that application "for such permit shall be made in duplicate to the local health officer at least fifteen days before the opening of the camp on a form prescribed by the State Commissioner of Health." It also provides that "if the local health officer is satisfied after in

spection that the existing or proposed camp will not be a source of danger to the health of its occupants or to others and that it conforms to the requirements of the chapter (now known as Chapter VII of the Sanitary Code), he shall issue the necessary permit in writing." It provides further that the permit shall expire on December 31 following the day of issuance, and "that it may be revoked for cause either by the local health officer or by the State Commissioner of Health after a hearing."

The placing on the local health officers of the responsibility for the inspection of camps and the issuance of permits yearly has advantages as well as disadvantages. If the above provisions of the Sanitary Code could be complied with, the 3,000 camps in the state would be inspected at least once each year and steps could be taken to see that the provisions of the code would be met before the issuance of a permit to each particular camp. Many health officers, however, find it impossible to inspect all of the camps in their districts each year. Most of the camps are concentrated in summer resort regions such as the Catskills and Adirondacks and are occupied for only two or three months during the summer, which is the busiest time for the health officers, who naturally must give their private practice the right of way. Camp inspection is time consuming. It requires about a day to make a thorough original inspection of a large camp and perform the necessary office work in connection with the preparation of the report and the issuance of a permit. In some areas there are so many camps that it would require the entire time of the health officer during the summer months to make the necessary inspections and issue permits which, of course, could not be expected especially from part-time health officers. The result has been that a large number of permits have been issued to camps by health officers without inspection, and in many instances camps have been operated without permits.

As might be expected this lack of adequate supervision over camps has re-

sulted in the occurrence of a number of preventable outbreaks of disease. The majority of these outbreaks have been classed as gastroenteritis. Although the average number of cases per outbreak has been low, several have involved fifty or more cases. Fortunately the deaths have been very few.

In order to correct this condition and assist the health officers to more adequately supervise camps the Bureau of Camp Sanitation was established in the Division of Sanitation of the Department in 1935 with a well-qualified and experienced sanitary engineer in charge, and in 1937 it was possible through Social Security funds to employ 8 junior sanitary engineers for camp inspection. Before that time the inspection service provided by the engineers of the Department was limited to problems of an engineering nature when called upon for assistance by the health officers or camp authorities and to inspections by our field forces of organized children's camps, of which there are approximately 800 in this state.

The inspection by the junior engineers supplemented by our 19 district and assistant district engineers has resulted in marked improvements in the sanitary conditions of camps and has relieved health officers to some extent of the burden of camp inspections, although they continue in all cases to issue permits for the operation of camps as required by the Sanitary Code. Reports setting forth the results of the inspection by our engineers and making recommendations for needed improvements are sent to the camp authorities and to the local health officers for their information and guidance in issuing permits.

Funds for the employment of additional engineers for camp inspection were appropriated by the legislature [1939], thus making it possible for us to exercise much closer supervision over camps and prevent the occurrence of preventable outbreaks of disease due to overcrowding, unsafe water and milk supplies, and other unsatisfactory conditions. It is hoped that the Depart-

ment ultimately will be able to take over entirely the supervision of camps, including camp inspections and the issuance of permits and relieve local health officers of this responsibility. It is our aim to have all camps in this state so

constructed and operated that the occupants will have the same health and safety protection they receive at home so that parents may send their children to summer camps confident that they will return home healthy and happy

## WANTED—A DOCTOR

How does one go about the business of finding a good doctor? asks the *Detroit Medical News*. Does he go down the street with a lantern like Diogenes and look for an honest face or an appealing name? Or, as one wag puts it, does he simply spot the nearest office, inquire—"Doctor (Doc), next to yourself who is the best stomach, heart, kidney, and liver specialist hereabout?" and go there

As a matter of fact, we are assured, possibly with a little more finesse, that is often the way it is done unless the physician first consulted has the wit to declare that by virtue of being the best he is also the next best in his field

Mostly, however, the seeker of medical care does neither of these things. When the average citizen is concerned about his health he turns to his neighbor. The neighbor recommends a doctor toward whom, for a variety of reasons, he feels grateful. The doctor once upon a time may have accepted a sack of turnips for his fee when the "missus" was not doing very well or he may have arrived in the nick of time to push a peach pit down the gullet of junior when that worthy was turning all the colors of the rainbow and it seemed he surely must die. The point is, and let us make it clear the grateful patient is the publicity agent par excellence of all doctors, and as his breed multiplies the physician's practice multiplies

Who then is a good doctor? He must first of all be a safe doctor. The state laws are very stringent about the qualifications of the person who may be called to attend a sick horse, a cow, or a swine. He must be a doctor of veterinary medicine and be familiar with the anatomy, the physiology, and the pathology of the animal he is called to treat

The person called to attend a human being who may be sick unto death need not be so qualified. Although doctors of medicine are rigidly examined by the state in these fundamentals, a horde of other persons who may be gloriously ignorant of the anatomy, physiology, or pathology of humankind are also licensed and given the privilege of treating the sick according to their own conceits

Unless then you be a cow, a sheep or a pig, the seal of a great state upon the registration certificate of the person who has been asked to protect your life and your health is not a guarantee that he is a doctor of medicine or that he have even the elementary qualifications to perform the service you ask of him. The basic science law now effective in some states may in the future partly correct this abuse but today that is how it stands

What are the qualities of a good M.D.? The wise and very human Thayer of Johns Hopkins held that the best physicians came from the middle thirds of their classes. The brilliant minds of the upper crust are too often detached from the common problems of life, their vision is too often telescopic so that they do not see what is beneath their very noses and they often have the air of never quite knowing what life is all about

Einstein has said that the penalty of reading too much is to think too little so that the boys who know all the answers are often quite helpless when they are away from their books and are faced with new and trying situations. Sophistication is probably the greatest asset of the practicing physician, and he, who has freely associated with a wide variety of men, is already half a physician

So when you go into a doctor's office and there is kitchen linoleum on the floor, oil cloth on the tables, mission furniture, "Dewey at Manila Bay" or "The Baptism of Pocahontas" adorning the walls, do not lift up your skirts. You are in the great working world, the world of the plain people. These are like the walls of home to the patient. The chances are that in 96 per cent of the cases no Osler, no Weir-Mitchell, no John B. Murphy could serve these plain people any better than the physician who is a resident there

Let it be known that the requirements for entrance into the medical schools of America and for graduation as an M.D. are as rigid as at a West Point or Annapolis, that eight years are required for the attainment of the M.D. degree against the four years required to become an officer in the military service of the United States

And finally there is the never ending program of postgraduate work that must be zealously pursued to keep abreast of the rapid advances in medical practice

Let it be known that the modern doctor of medicine should therefore be a safe counselor wherever he be found. If when you consult him he takes a good history, asks you to remove your clothes, and carefully examines you however trifling your complaint, and if in addition he is well-met, can at all times be reached when you need him, you have found a good doctor

Wanted, a doctor! Let it be known that your county medical society is at all times willing to give the names of neighborhood physicians. It will also, upon request, give the details of the training, the experience and the special interests of the doctor chosen

# THE USE OF SULFANILAMIDE IN THE TREATMENT OF HEMOLYTIC STREPTOCOCCIC EMPYEMA

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ALTHOUGH the literature on the various aspects of sulfanilamide has been extensive, it is our opinion that its use in cases of hemolytic streptococcic empyema has not been settled. In reviewing the papers that have been written on this subject the impression was gained that there was considerable difference of opinion, not only as to the value of the drug in treating this condition but also as to the mode of administration. We wish to report a series of 7 consecutive cases in each of which sulfanilamide was administered. In some of our cases drainage was instituted in conjunction with the use of the drug, in others, with the exception of diagnostic aspiration, no type of drainage was employed.

Gay and Clarke, in experimental studies on rabbits, injected broth cultures of hemolytic streptococcus directly into the pleural cavity. These were of a fixed virulence and usually killed the animals in four to six days. The rabbits were fortified with sulfanilamide in relatively large amounts a few hours before the intrapleural infection with 1,000 to 2,000 M.L.D. The drug was continued for at least seven doses during the first two days, and an otherwise fatal empyema was aborted. The necessary dose was three daily subcutaneous injections, 20 cc each of a 2 per cent solution of the sulfanilamide crystals. These were dissolved in boiling water, then cooled to body temperature. This constituted a total of almost 3 Gm and effected complete protection against the streptococcus infection. It was noted by these authors that they were dealing with a preventative action and not with a true curative effect of the drug. In one rabbit in

which treatment was instituted twenty-four hours after the intrapleural infection, the animal survived for eleven days in contrast to the controls who uniformly died from four to six days. In a second rabbit, treatment was started forty-eight hours after the infection and death occurred on the fifth day similar to the controls. In further studies both controls and treated animals were sacrificed or died at various stages of the disease. In an untreated rabbit, killed in twelve hours, the increase of cocci was 6,500 times in twelve hours, whereas, in the treated animal this was only 10 times. This discrepancy became greater up to seventy-two hours, when the cultures were completely sterile in fully treated animals. The contrast between the amount of exudate was also very apparent, being markedly increased from twenty-four hours onward to the time of death in the control animals, and in only one of the treated animals was any appreciable amount of fluid present in the pleural cavity. In conclusion it is stated "Sulfanilamide prevents the evolution of an invariably fatal streptococcic empyema in rabbits when it was given repeatedly and in sufficient doses subcutaneously."

Tiling mentions the use of 5 cc of a 2½ per cent prontosil solution administered intrapleurally every two to three days combined with the removal of the empyema fluid (although it is not stated, I assume that this removal was accomplished by aspiration) and he reports cures in from seven to twenty-two days by this method. The number of cases is not noted in this article.

Klahn treated several cases of mixed tuberculous and streptococcic empyema with excellent results, by the intrapleural

use of 5 cc of a 2½ per cent solution of prontosil. He also cites a case of spontaneous pneumothorax following a pneumolysis with a mixed hemolytic streptococcic and pneumococcic infection in the pleural cavity that responded readily to the intrapleural use of the drug with a fall of the temperature to normal in five days.

Further observations in favor of this method are made by Brown in a report of 2 cases of hemolytic streptococcic empyema. The first patient was given prontylin tablets by mouth with apparently no effect on the pleural exudate, however, the culture became sterile after the injection of 5 cc of prontosil solution into the pleural cavity. The strength of this is not noted. Repeated aspirations were sterile to culture and the pus, which he describes as very thick, became thinner, completely disappeared, and the lung re-expanded. In the second case a similar condition existed, namely, a collection of thick creamy pus in the pleural cavity, which yielded a pure culture of hemolytic streptococcus. Following the injection of 5 cc of prontosil solution into the pleural cavity the pus became thinner, sterile, and completely disappeared.

Nicholson states, in an article dealing with experimental work on rabbits, that the animals given prontosil solution into the pleural cavity in addition to a broth culture of hemolytic streptococcus died earlier than the animals receiving the culture alone, and that the treated animals yielded a higher percentage of positive cultures from the pleural cavity than the untreated. When prontosil solution was injected into the virgin pleural cavity, no gross damage to the tissues was noted, although a reduced local resistance was suspected in 1 case. It was his observation that the intramuscular injection of prontosil gave better results than its injection into the pleural cavity. He mentions that the only successes following intrapleural use of the drug occur in clinical reports, the number of cases rarely exceed 2 or 3. It is his observation that the cases reported

were those in which the first aspiration yielded thick pus. He feels that the injection of the drug may have little to do with the subsequent thinning of the exudate and the disappearance of the organism, because the dangerous stage of the disease is then passed, and suggests that the time when the drug is most indicated, is, of course, at the onset of the infection during the activity of the pneumonia in the formative stage of the empyema. It is his impression that the oral administration is more logical than the intramuscular or intravenous use, and that if the drug is introduced into the pleural cavity it should be combined with the oral administration. In summarizing, it is stated that the 15 untreated animals survived an average of seven and one-half days each, and culture of the pleural fluid was positive in 53 per cent. Seventeen animals that were treated with intrapleural prontosil survived an average of five and seven tenths days with 70 per cent positive pleural cultures. Eight animals treated with intramuscular prontosil survived an average of seven and eight-tenths days with 37 per cent positive cultures from the pleural cavity. In conclusion, it was believed that the treated animals died earlier than the controls, and no sterility of the empyema was produced. In this series of experiments none of the animals was given the drug before the culture was introduced into the pleural cavity.

Dyke observes that in preparations examined by him it appeared safer to use the oral route rather than the parenteral injection.

Gmelin reports 2 cases of hemolytic streptococcic empyema both of which were treated by prontylin, orally. One was drained in addition to the administration of the drug, the other was not. In each instance there was a prompt recovery, one developing a normal temperature on the third day, the other on the sixth, both by lysis.

Bohrer reports a case of hemolytic streptococcic pneumonia in a 10 week-old child that ran a normal course and de

veloped an empyema with absolutely no effect following the treatment with prontosil and prontylin. This child had, on a recent previous admission, been cured of erysipelas with the use of prontosil. He concludes his discussion with an expression of discouragement, because after several cases with spectacular results in the treatment of erysipelas, the drug was entirely negative in a group of 5 cases of hemolyzing streptococcic empyema.

Bahrdt reports good results with the use of prontosil in cases of streptococcic empyema. He does not report the number of cases or the method of administration.

Huber mentions 1 case of hemolytic streptococcic empyema in a boy 6 years of age who was aspirated frequently and given prontylin by mouth. Following therapy the temperature rapidly reached normal with a definite cure and disappearance of the purulent exudate.

Paffrath reports startling successes in a small series of cases of metastatic streptococcic empyema through the use of prontosil solution intramuscularly. The number of cases in this series is omitted.

Coryllos was enthusiastic about its use in a series of 5 cases of mixed infection tuberculous empyema in which hemolytic streptococcus was present. In his experience, the best results were obtained by the combined use of anti-streptococcic serum with prontosil and prontylin, and he notes that this type of treatment is far more effective than the treatment with either of the two alone. He further comments that the empyema fluid was sterilized in the course of four to five weeks.

Melnotte and Briquel report 7 cases of hemolytic streptococcic empyema that were treated with sulfanilamide, orally. They classify these into 5 that were treated early and 2 treated late. In the first 4 cases the hemolytic streptococcus present in the pleural fluid at the first tap disappeared in successive taps but the drug did not prevent the purulent transformation in Case 5, where pleurotomy was necessary. In each of these

cases the patient was a 21-year-old male. In Cases 6 and 7 treatment was started much later. In the former it was given on the forty-second day of an encysted purulent pleurisy which yielded hemolytic streptococcus on culture. Treatment was rubiazol, 8 tablets daily for eleven days, then 12 tablets daily for twelve days, the total was 136 tablets or 34 Gm. The patient was discharged after a slight relapse and apparently drainage was not performed. In the seventh case the treatment was started on the twenty-third day or nine days after a pleurotomy, which was done on the fourteenth day. In this instance the action of the drug was quite definite, the patient being cachectic with decubitus and was in an almost hopeless condition. There was sterile fluid in the right pleural cavity and thick pus in the left. On the fourteenth day following administration, the patient "vomited" streptococcus pus and the temperature slowly leveled off. Anti-streptococcic serum of Vincent was used in combination with rubiazol, and it was noted that the patient was improved at the time of publication. These authors feel that the use of the drug is warranted, even in cases that have had pleurotomy, and that it constitutes an important progress in the medical treatment of streptococcic purulent pleurisy. They feel that, if it does not cure these streptococcic empyemas, it at least improves conditions under which surgery may be done, or where suppuration is prolonged after surgery.

Gardner reports a case of hemolytic streptococcic paracarditis that went on to complete recovery following the oral use of the sulfanilamide without any type of drainage.

Basman and Perle report 2 cases, first of which was that of a 13-month-old boy with hemolytic streptococcic empyema following a lobar pneumonia eight weeks prior to admission. He had an open operation with a persistent sinus and recurring temperature about five weeks following removal of the tube. Physical signs and x-ray examination revealed that the left chest was filled with



fluid with displacement of the mediastinum, and a positive culture of hemolytic streptococcus was obtained from the sinus tract. Sulfanilamide was given by mouth. At the end of the first day the temperature returned to normal and remained there. Two days later a thoracotomy was performed and the child recovered. The second case was that of a 1-year-old boy presenting a hemolytic streptococcic empyema following a pneumonia of ten days duration. Closed drainage was performed and he was given the drug both intramuscularly and orally. The temperature gradually subsided for the following three days, but he again became septic. The drug was increased, but the child expired. A bronchopneumonia, bilateral empyema, and anterior mediastinitis were found.

Keefer mentions a fatal case of hemolytic streptococcic pneumonia with empyema and bacteremia that was treated by sulfanilamide, orally, and open drainage. Cultures from the empyemic cavity and blood stream became negative, but the patient died with a type XII pneumococcus pneumonia and bacteremia.

Hageman cites 5 cases of hemolytic streptococcic pneumonia, 3 of which had empyema when the treatment with sulfanilamide was instituted. He noted that in each instance, although a difficult therapeutic problem occurred through contraction of the chest and thickening of the pleura, the severity of the disease was modified. Two of the 3 cases required thoracotomy and all recovered.

Four interesting cases of infection within the chest that were treated with sulfanilamide are included in an article on the subject by Ballou and Goldbloom. First of these was that of an extremely sick child with multiple areas of streptococcic infection and draining sinuses following scarlet fever. There was one large deep abscess in the anterior thoracic region between the endothoracic fascia and the ribs with a question of mediastinal effusion. The child had several operations and numerous recognized forms of treatment, but in spite of

this, she continued her downward course. Prontylin was given and the response was dramatic. The temperature dropped to normal within twenty-four hours. The density in the chest cleared, there was a gain in weight, and the sinuses healed. In the second case there was a left lower lobar pneumonia with evidence pointing toward pus in the pleural cavity, although the presence of an unresolved pneumonia was suspected. On two occasions aspirations were productive of a clear type of fluid which on culture revealed hemolytic streptococcus. Although there were two fluid levels on the x-ray film with displacement of the mediastinum to the right, and a septic temperature, a definite pocket of pus could not be located on repeated needle punctures. The patient's condition became desperate and death was thought to be imminent. As a last resort treatment with prontosil intramuscularly was started, improvement was noted in twenty-four hours, and the patient was discharged from the hospital seventeen days later with a slightly elevated temperature. She was given prontylin and within two days her temperature dropped to normal. Case 3 is that of a boy, 6 years old, with signs of pneumonia with fluid at the left base. Aspiration yielded a blood-tinged, slightly purulent fluid from the left pleural cavity with no bacteriology noted. Prontylin, orally, was given in small doses, one tablet three times a day. After a prompt improvement he became acutely ill and prontosil intramuscularly was given, also two doses intravenously, with a fall in temperature and a gradual improvement in the physical signs. Subsequent thoracentesis revealed a dry tap. An x-ray film showed thickening of the pleura at the left base with presence of adhesions. The fourth case was one of a mixed infection empyema with open drainage, and the organisms recovered were staphylococcus and streptococcus. Prontylin was given in apparently small doses, a hemolytic streptococcic septicemia developed, and prontosil solution, in large doses, was injected intramuscularly. She also received prontylin,

orally, at this time, and 10 cc of the solution was instituted into the empyema cavity at each irrigation. The blood culture became negative, temperature dropped to normal, patient was discharged with a small residual empyema cavity. They observed that the discharge from the empyema was always scanty when prontosil or prontosis was given.

Lester, in a recent article, reports 4 cases of hemolytic streptococcic empyema in children, 3 of which were adequately treated with sulfanilamide, prontosil, or both, but in each instance surgery was necessary to effect a cure, and from the reports it does not appear as if the course of the empyema was altered in any way. In the fourth case the drug was used after surgery, and it was observed that this had the shortest drainage time in the series. The other favorable observations made by this author on the use of this drug in such cases was that all 4 recovered, although 3 of them were very sick and one was only 10 weeks old, also that the temperature before operation was lower than should ordinarily be expected. A reference accompanying this paper expressed the opinion that even in the light of added knowledge concerning sulfanilamide therapy, their impression about its application in empyema is not changed, and that the indications for surgery are just the same as they were before the drug was introduced.

The following cases are reported in detail, so that the progress of the disease under treatment might be noted.

The accompanying charts show the dosage of the drug, cultures of the pleural fluid, and temperature reactions.

### Case Reports

Case 1—J. H., male, aged 5½ years, Buffalo Children's Hospital.

1/11/37 Forty-eight-hour attack of German measles with transient rash. History of other members of the family with similar condition. Associated cold kept him in bed for one week.

1/19/37 Developed a high fever with anorexia and a severe cough.

1/21/37 Respirations became labored.

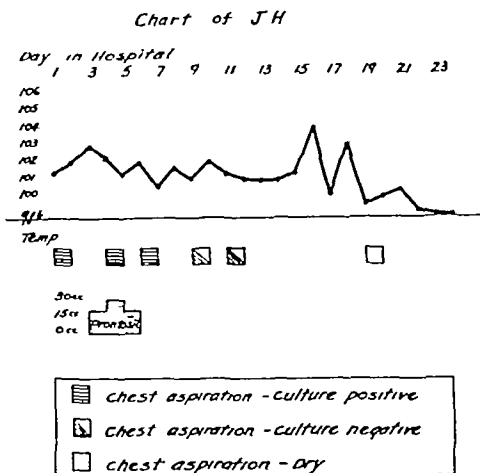


FIG 1

1/24/37 Admitted to the hospital. Temperature 102.5 F, pulse 140, respirations 40. Child appeared acutely ill with labored respirations but no apparent cyanosis. Anterior cervical nodes enlarged, eardrums slightly injected, pharynx and tonsils reddened, signs of fluid in the right chest from the axilla to base. Bronchial breathing over right apex, abdomen slightly distended, spleen palpable. Hemoglobin 106, r b c 5,200,000, w b c 38,250, polymorphonuclears 84 per cent. X-ray examination revealed fluid in the right pleural cavity. Aspiration yielded 270 cc of yellow cloudy fluid which yielded a pure growth of streptococcus hemolyticus on culture.

1/26/37 Administration of prontosil, intramuscularly.

1/27/37 On thoracentesis 85 cc of yellow cloudy fluid, which was positive on culture for hemolytic streptococcus, was withdrawn.

1/29/37 Chest fluid still gave a positive culture for streptococcus hemolyticus. Blood culture negative. Temperature remained elevated.

2/1/37 Culture of chest fluid negative.

2/3/37 Culture of chest fluid again negative.

2/4/37 Examination of the chest revealed dullness throughout the right side with suppressed breath sounds. X-ray showed that the opaque shadow was less in density and smaller in area than on previous examination.

2/11/37 Temperature has been septic in type for the past three days reaching as high as 104 F. No fluid was obtained on aspiration of the chest.

2/14/37 Blood culture negative. Temperature reached normal and remained so until discharge. Pulse varied between 120 and 140 dur-

fluid with displacement of the mediastinum, and a positive culture of hemolytic streptococcus was obtained from the sinus tract. Sulfanilamide was given by mouth. At the end of the first day the temperature returned to normal and remained there. Two days later a thoracotomy was performed and the child recovered. The second case was that of a 1-year-old boy presenting a hemolytic streptococcic empyema following a pneumonia of ten days duration. Closed drainage was performed and he was given the drug both intramuscularly and orally. The temperature gradually subsided for the following three days, but he again became septic. The drug was increased, but the child expired. A bronchopneumonia, bilateral empyema, and anterior mediastinitis were found.

Keefer mentions a fatal case of hemolytic streptococcic pneumonia with empyema and bacteremia that was treated by sulfanilamide, orally, and open drainage. Cultures from the empyemic cavity and blood stream became negative, but the patient died with a type XII pneumococcus pneumonia and bacteremia.

Hageman cites 5 cases of hemolytic streptococcic pneumonia, 3 of which had empyema when the treatment with sulfanilamide was instituted. He noted that in each instance, although a difficult therapeutic problem occurred through contraction of the chest and thickening of the pleura, the severity of the disease was modified. Two of the 3 cases required thoracotomy and all recovered.

Four interesting cases of infection within the chest that were treated with sulfanilamide are included in an article on the subject by Ballou and Goldbloom. First of these was that of an extremely sick child with multiple areas of streptococcic infection and draining sinuses following scarlet fever. There was one large deep abscess in the anterior thoracic region between the endothoracic fascia and the ribs with a question of mediastinal effusion. The child had several operations and numerous recognized forms of treatment, but in spite of

thus, she continued her downward course. Prontylin was given and the response was dramatic. The temperature dropped to normal within twenty-four hours. The density in the chest cleared, there was a gain in weight, and the sinuses healed. In the second case there was a left lower lobar pneumonia with evidence pointing toward pus in the pleural cavity, although the presence of an unresolved pneumonia was suspected. On two occasions aspirations were productive of a clear type of fluid which on culture revealed hemolytic streptococcus. Although there were two fluid levels on the x-ray film with displacement of the mediastinum to the right, and a septic temperature, a definite pocket of pus could not be located on repeated needle punctures. The patient's condition became desperate and death was thought to be imminent. As a last resort treatment with prontosil intramuscularly was started, improvement was noted in twenty-four hours, and the patient was discharged from the hospital seventeen days later with a slightly elevated temperature. She was given prontylin and within two days her temperature dropped to normal. Case 3 is that of a boy, 6 years old, with signs of pneumonia with fluid at the left base. Aspiration yielded a blood-tinged, slightly purulent fluid from the left pleural cavity with no bacteriology noted. Prontylin, orally, was given in small doses, one tablet three times a day. After a prompt improvement he became acutely ill and prontosil intramuscularly was given, also two doses intravenously, with a fall in temperature and a gradual improvement in the physical signs. Subsequent thoracentesis revealed a dry tap. An x-ray film showed thickening of the pleura at the left base with presence of adhesions. The fourth case was one of a mixed infection empyema with open drainage, and the organisms recovered were staphylococcus and streptococcus. Prontylin was given in apparently small doses, a hemolytic streptococcic septicemia developed, and prontosil solution, in large doses, was injected intramuscularly. She also received prontylin,

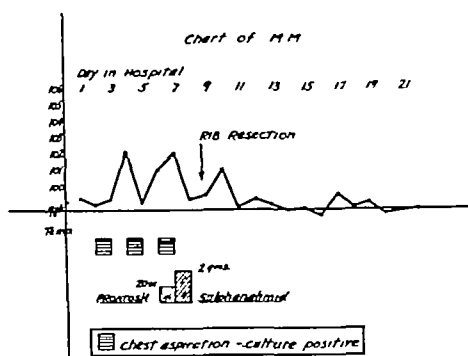


FIG 4

solution, intramuscularly, administered. Temperature had risen to 103 F on the two previous afternoons. X-ray examination revealed only a small amount of fluid present.

2/25/37 Seventy-five cc of thick pus removed on aspiration in the fifth interspace, posteriorly. This showed gram-positive cocci in short chains on smear and streptococcus hemolyticus on culture.

2/26/37 Open drainage was instituted by removal of a portion of the eighth rib in the posterior axillary line on the left side under local anesthesia. An empty empyemic cavity was opened into, it contained no fluid or pus, only a small amount of fibrin being present. Histologically, this fibrin showed a hemorrhagic exudate with a fair number of leukocytes with no organisms seen and on culture only a few colonies of streptococcus hemolyticus.

2/28/37 Temperature normal, remained so.

3/3/37 Large drainage tube removed and Dakin's tube left for irrigations. The child developed an impetigo lesion on the face and was again put on prontosil therapy. This rapidly cleared up. Culture of this lesion showed the presence of streptococcus hemolyticus.

4/2/37 Repeated x-ray films of the chest showed a progressive improvement.

4/8/37 Child discharged apparently cured.

8/18/37 Fracture of the both bones of the right forearm, healed with no complications.

2/21/38 Admitted for tonsils and adenoids. Uneventful convalescence.

6/4/38 X-ray of the chest shows the lungs entirely clear with no pleural thickening.

### Comment

The above is a case of hemolytic streptococcal empyema apparently of long standing. The child was operated upon because of the large amount of fibrin in the exudate and septic temperature,

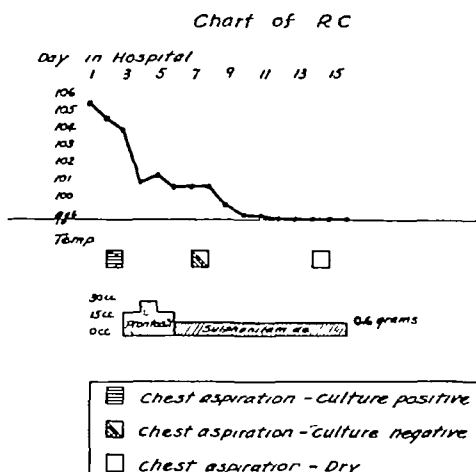


FIG 5

however, there was very little, if any, drainage and the cavity was free from fluid at the time of operation. The tube was withdrawn at the end of four days, and the lung completely re-expanded in spite of the pleural thickening which was present. I am not convinced that the operation influenced the convalescence particularly and, possibly, was unnecessary.

Case 3—R. C., female, aged 6 years, 10 months, Buffalo Children's Hospital.

2/23/37 Illness with high fever and skin eruption which apparently was measles. On the following day child had fever, weakness, chills, and dyspnea. Temperature was higher at night than during the day.

3/3/37 Both eardrums ruptured spontaneously.

3/8/37 Labored and noisy respirations were noticed.

3/9/37 Admitted to the hospital, temperature 105.2 F, pulse 132, respirations 40. Child appeared critically ill with labored respirations and slight cyanosis. Cervical nodes moderately enlarged, bilateral otitis media, limited expansion of the left chest with scattered coarse and fine rales throughout both sides, dullness to percussion, and distant breath sounds in the left interscapular region, early clubbing of fingers. Urinalysis 4 plus albumin, 1 plus sugar, and many white cells, leukocytes 24,000, segs 6, stabs 29, lymphs 1, monosaccharides 4, tuberculin and Kahn tests negative. X-ray examination of the chest showed an opacity in the left base with no displacement of the mediastinum. Aspiration of the left chest revealed



FIG 2, CASE 1 Fluid in the right pleural cavity before treatment was instituted

ing his stay in the hospital. Respirations ranged around 40 for the first week, 30 the second week, and 24 for the third week. Marked clinical improvement was progressively noted with a gradual clearing of the right chest, except for a slight dullness on percussion note on the right side, which was noted at the time of his discharge on March 9.

9/3/37 Child was admitted for drainage of an inguinal abscess. Culture of the pus showed staphylococcus aureus nonhemolyticus, this promptly healed.

6/24/38 Check-up x-ray examination of the chest showed the right chest to be perfectly clear with no pleural thickening present.

### Comment

The above is a proved case of hemolytic streptococcal empyema which seems to have been cured by chemotherapy. The aspirations done were largely of a diagnostic nature, only a small amount of fluid being withdrawn for culture on most occasions.

At the time I first saw this patient, culture of the chest fluid was negative, the child having been treated on the pediatric service. At the time of the secondary rise in temperature I planned to institute surgical drainage, but no

fluid could be obtained on aspiration and the marked clinical improvement, which promptly followed, precluded the necessity for surgery. The convalescence seems to be complete.



FIG 3, CASE 1 Lung almost completely expanded two weeks later; no fluid obtained on aspiration

*Case 2*—M M, female, aged 3 years 4 months, Buffalo Children's Hospital.

10/1/36 Child had a severe cough lasting for five weeks, which the mother assumed to be whooping cough, following this she never fully regained her health, being tired, weak, and having lost weight, with poor appetite and a slight persistent nonproductive cough.

2/19/37 Admission to the hospital because of the above symptoms. Temperature 96 F, pulse 130, respirations 28. Child did not appear acutely ill. Pharynx slightly reddened and anterior cervical nodes palpable. Chest examination revealed limited motion on the left side with dullness and absent breath sounds over the entire left chest anteriorly and posteriorly. Apex beat slightly displaced to the right. Hemoglobin 90 per cent, wbc 16 000, polymorphonuclears 84 per cent. Tuberculin and Kahn tests negative. X-ray examination revealed an opacity in the lower two-thirds of the left chest without any mediastinal displacement.

2/20/37 Thirty cc of thick yellow pus removed from the left side. Positive on culture for hemolytic streptococcus.

2/24/37 Protosil orally and protovim

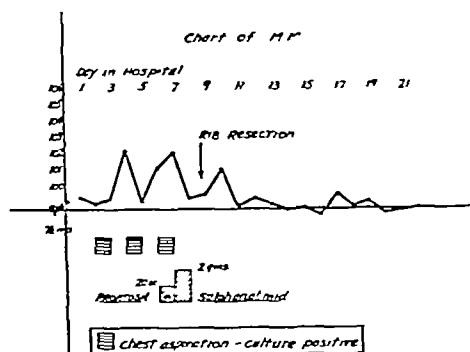


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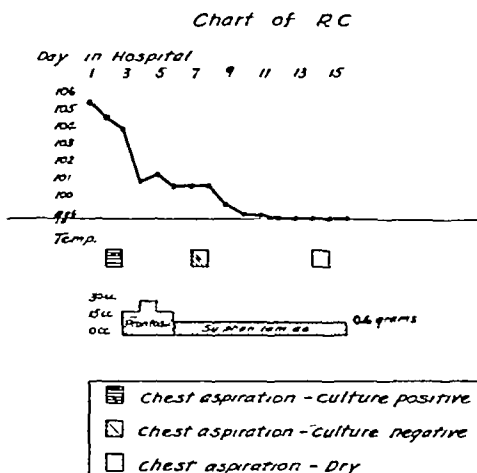


FIG 5

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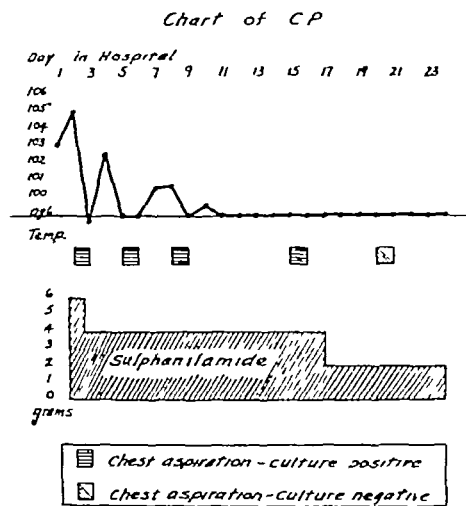


FIG 8

opacity over the entire right side with some displacement of the heart. A thoracentesis was done on the right side and 225 cc of thin yellowish fluid was removed. Smear showed gram-positive cocci in chains which on culture proved to be streptococcus hemolyticus.

4/8/37 Prontylm therapy was begun and child was transfused.

4/8/37 X-ray examination showed an area of pneumothorax in the lateral right chest wall with fluid level at the base, the lung being somewhat compressed, and heart displaced to the left.

4/9/37 Aspiration revealed 50 cc of straw-colored fluid with some air. Culture positive for hemolytic streptococcus. A spinal puncture was done which revealed five cells, negative globulin and negative copper reduction.

4/12/37 Diagnostic aspiration yielded fluid which was positive on culture for hemolytic streptococcus. Transfused.

4/14/37 Transfused.

4/18/37 Diagnostic aspiration revealed fluid which was positive on culture for hemolytic streptococcus only after seventy-two hours.

4/20/37 X-ray examination showed much better lung expansion and no evidence of fluid.

4/24/37 Diagnostic aspiration revealed fluid which was sterile on culture.

4/29/37 X-ray examination showed continued improvement with gradual re-expansion of the lung.

5/5/37 Discharged.

6/21/37 X-ray of the chest showed both lungs clear with no pleural thickening.

### Comment

I feel that this case of hemolytic strep-



FIG 9 CASE 4 Opacity throughout the entire right chest with mediastinal displacement

tococcic empyema with a synpneumonic area in an infant, having gone on to complete recovery, is quite conclusive. There was a large amount of infected fluid present in the pleural cavity, which subsequently became sterile with complete absorption, re-expansion of the lung, and no pleural thickening. The aspirations were largely only of a diagnostic nature.



FIG 10, CASE 4 Lung re-expanded no fluid or apparent pleural thickening

Case 5—M B, female, aged 5 years, 5 months, Buffalo Children's Hospital





FIG 6, CASE 3 Accumulation of fluid at the left base, positive on culture for streptococcus hemolyticus

thin fluid which yielded a pure culture of hemolytic streptococcus. Child was placed in an oxygen tent, fluid balance maintained, prontosil therapy instituted.

3/16/37 Child out of oxygen much improved, fluid markedly lessened in amount. Five cc of straw-colored fluid removed from the left chest which was sterile on culture.

3/17/37 X-ray examination revealed a longitudinal opacity along the lateral chest wall presumably due to encapsulated fluid and pleural thickening.

3/22/37 Chest tap revealed fluid which was sterile on culture.

3/23/37 Parents signed release for discharge of this child against our advice and without our consent. Temperature, pulse, and respirations were normal.

4/19/37 Child was admitted to the Emergency Hospital with signs of empyema in left chest, fluid revealed streptococcus, staphylococcus, and pneumococcus.

4/21/37 Open drainage performed on the left side.

5/2/37 Drainage tube removed.

5/10/37 Child discharged as cured. She was practically afebrile during her stay in the hospital.

### Comment

The response in this case was so prompt it is hard to understand how there was a recurrence of the empyema on the left side and also, how infection became

mixed. I feel that perhaps therapy was not intensive enough and was discontinued too early, and that it is more than likely that the pleural infection could have been controlled without surgery under different handling.



FIG 7, CASE 3 At the time of discharge showing encapsulated pocket of fluid which was negative on culture.

Case 4—C P, female, aged 9 months, Buffalo Children's Hospital.

At the age of two months treated for congenital lues with beginning optic atrophy.

At the age of 5 months bronchopneumonia on the right side, convalescence complete in twelve days.

At the age of 7 months admitted for diarrhea and discharged as cured in four days.

4/2/37 Child was taken ill with severe attack of vomiting and coughing. The mother noticed the child's breathing was labored and difficult, and a physician diagnosed the case as bronchitis.

4/5/37 Child admitted to the hospital, temperature 103 F, pulse 150, respirations 60. She appeared acutely ill with moderate cyanosis of the lips and fingernails. Examination of the chest revealed dullness to flatness throughout the whole right side with distant breath sounds over the lower portion and tubular breathing with a few fine rales in the apical region. There were occasional areas of bronchial breathing on the left side. The heart was slightly displaced to the left and abdomen distended. Hemoglobin 35 per cent, wbc 16,200, polymorphonuclears 86, lymphs 12, mononuclears 1, eosinophils 1, urinalysis negative, Kahn negative. X-ray examination of the chest showed an

Chart of C P

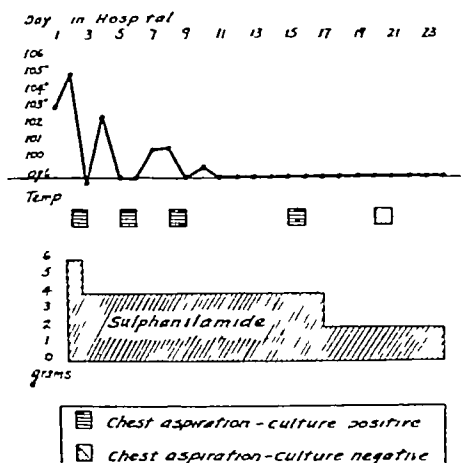


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Case 5 — M. B., female, aged 5 years, 5 months  
Buffalo Children's Hospital

Chart of M B

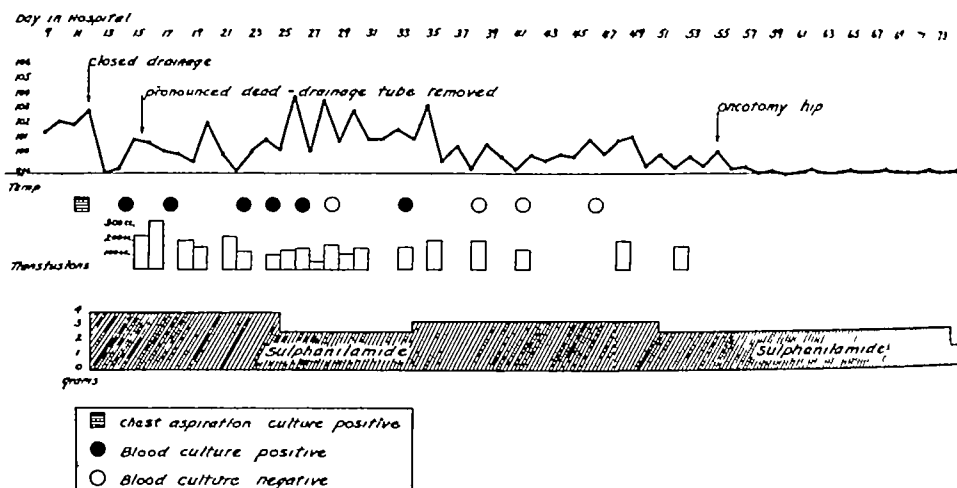


FIG 11

4/24/37 Child began to have abdominal pain and vomiting associated with a severe cough. Symptoms persisted for six days following which improvement was noted.

5/1/37 Admitted to the hospital. Sent in with the diagnosis of acute appendicitis. Temperature 105 F, pulse 140, respirations 30. Child appeared acutely ill, respirations were labored and noisy, face was flushed but no cyanosis, pharynx reddened. Impaired resonance over the right base, increased vocal and tactile fremitus throughout this area, scattered rales in the left chest, abdomen essentially negative. Urinalysis and tuberculin test negative. Hemoglobin 90 per cent, r b c 4,800,000, w b c 15,200, polymorphonuclears 86%, eosinophils 1%. X-ray examination revealed bronchopneumonia in both lungs. Child ran a temperature ranging for most of the time between 102 F and 103 F until May 9, 1937, when it reached normal.

5/8/37 Throat culture yielded staphylococcus aureus nonhemolyticus.

5/10/37 Temperature again elevated to 102 F and x-ray film revealed fluid in the left chest.

5/11/37 Aspiration of chest revealed a rather thick fluid which on culture showed streptococcus hemolyticus. Sulfanilamide was given by mouth.

5/12/37 A report of staphylococcus aureus, which was intended for the throat, was erroneously made as having come from the pleural cavity, and as the fluid contained considerable fibrin a small portion of the eighth rib was resected under local anesthesia and drainage tube inserted into the pleural cavity. The wound was

closed tightly about the tube and closed drainage maintained.

5/13/37 Blood culture revealed streptococcus hemolyticus.

5/14/37 Marked interstitial emphysema which gradually developed from the time of operation, now extended over the entire body. Sutures were loosened about the tube and the drainage converted to open. Temperature reached normal.

5/15/37 The child ceased breathing from four to five minutes, was pulseless, had dilated pupils, and was thought to have expired. Drainage tube was removed and considerable sloughing had taken place about the operative wound leaving an opening through which the diaphragm and lower lobe were visible. Child began to breathe, her pulse became perceptible, temperature rose to 103 F. The tube was not replaced because there appeared to be adequate drainage and no tendency for the opening to close. There was no paradoxical breathing.

5/27/37 X-ray examination showed that the left lung was re-expanding. There was no filtration in the left upper chest, but no fluid or pleural thickening was visible. Marked interstitial emphysema.

6/4/37 Smear from the pleural cavity showed a streptococcus hemolyticus and staphylococcus albus. Patient was given a total of nineteen transfusions of citrated blood varying in amounts from 50 to 330 cc. Regular blood counts and urinalyses were done showing varying degrees of anemia and nothing remarkable in the urine.

6/7/37 Blood culture was sterile for the first time.



FIG 12, CASE 5 Large accumulation of fluid in the left chest.

6/8/37 Child resumed a septic type of temperature reaching 104 F daily, pulse varied between 140 and 160 Dakin's tube was inserted in the wound for irrigations

6/10/37, 6/12/37, 6/14/37 Sterile blood cultures Temperature reached a lower level rising only to a peak of 101 F

6/25/37 X-ray examination of the chest showed the left lung re-expanded with no evidence of pleural thickening or fluid The interstitial emphysema had disappeared and there was an upward dislocation of the right hip with a soft tissue swelling about the left hip The abscess about the left hip was drained and the culture of the pus revealed streptococcus hemolyticus The right hip was placed in traction Following drainage of the abscess about the hip the temperature dropped and never again rose above 100 F rectally, being normal most of the time and remaining so after August 1

7/16/37 X-ray examination of the chest from two planes showed good expansion of the left lung There was some pleural thickening and no fluid present Wound in left chest closed so that only a small sinus was present

7/24/37 She developed pain and photophobia in the left eye. Ten days later there appeared an intense circumcorneal injection with cloudiness of the cornea. This was diagnosed as a pteryctenular keratitis During her convalescence in the hospital she was placed on an intense vitamin therapy

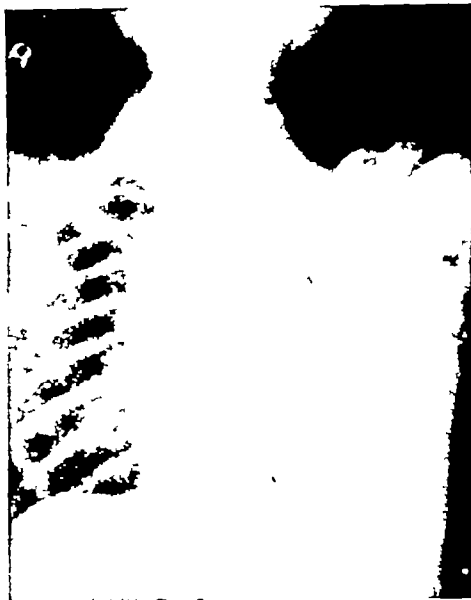


FIG 13, CASE 5 Two weeks postoperative re-expansion of the lung, pleural thickening, interstitial emphysema

8/18/37 She was discharged to the outpatient department

8/20/37 Wound was entirely healed, following this she was seen for several months in the outpatient department with progressive improvement of both the eye and the hip

9/24/37 Patient was allowed off crutches at which time hips had a normal appearance.

6/27/38 X-ray examination of the chest showed it to be perfectly clear with no pleural thickening

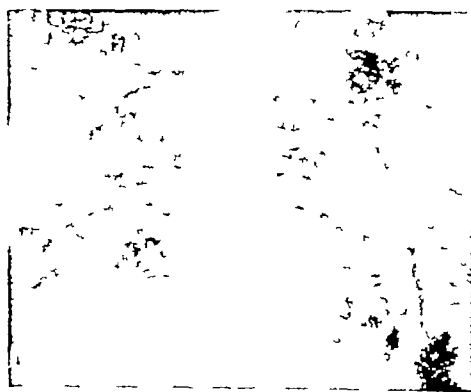


FIG 14, CASE 5 Showing disappearance of the interstitial emphysema, lung almost completely re-expanded, slight pleural thickening

## Comment

This child was desperately ill and had several rather serious complications. I do feel that she would not have survived her illness without the help of sulfanilamide. The drainage tube was left in the chest for only three days and in spite of this, the pleural cavity became eventually sterilized and the lung went on to complete re-expansion. Child's condition became much more grave following the operation, and I feel very strongly that a more conservative type of treatment might have been better.

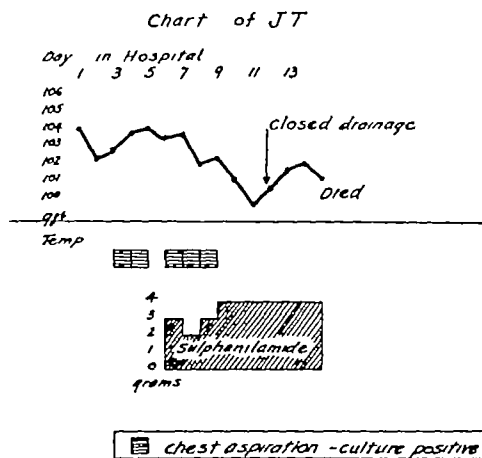


FIG 15

Case 6—J F, male, aged 7 years, Buffalo Children's Hospital

1/4/38 Admitted to the hospital. Temperature 104 $\frac{1}{2}$  F, pulse 160, respirations 40. Child was taken ill on the morning of admission with pain in the epigastrium, which later shifted to the right lower quadrant with vomiting. He also had a cough, chills, and felt feverish. He appeared acutely ill and examination of the chest revealed distant breath sounds and dullness over the right base, posteriorly. Urinalysis, Kahn, and tuberculin tests all negative. X-ray examination showed a small area of pneumonia at the base of the right lung.

1/7/38 After three days of bed rest, sedatives, fluids, and continuous oxygen, child ran a temperature of 104 F, with practically no remission since admission. Pulse 104, respirations between 40 and 50. Physical examination revealed flatness with absent breath sounds throughout the right lower chest. A thoracentesis was done and 140 cc. of yellowish fluid withdrawn, the

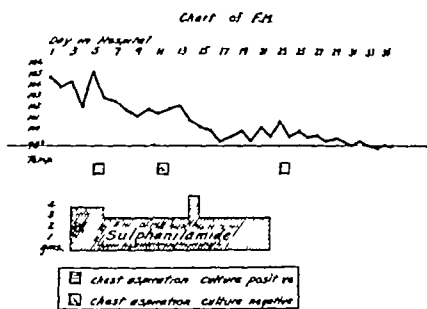


FIG 16

culture of which revealed streptococcus hemolyticus. X-ray examination on this date showed the area of pneumonia in the lower lobe of the right lung had increased in size. The heart and trachea were displaced to the left. Right diaphragm was obscured.

1/10/38 Aspirations were performed almost daily and all of the fluid that could be obtained was withdrawn, each specimen revealed a positive culture for streptococcus hemolyticus. Five blood transfusions were performed. Treatment with sulfanilamide by mouth.

1/13/38 Sulfanilamide estimation in the blood was 4.6 mg per cent, in chest fluid 2.0 mg.

1/14/38 Temperature gradually reached normal, pulse 90, respirations 30. Blood count revealed hemoglobin 146 per cent, rbc 7,620,000, wbc 29,300, polymorphonuclears 40, lymphs 6. His temperature had started a gradual upward climb and reached 102 F on January 17. Blood culture sterile.

1/15/38 Temperature began to rise. X-ray examination showed an increase in the amount of fluid, and the displacement of the heart and trachea to the left. Child was markedly cyanotic and dyspneic and although his condition was desperate, closed drainage was performed. His temperature continued to rise and he became markedly jaundiced and expired January 18, 1938. Permission for autopsy was refused.

## Comment

This represents our only fatal case, it was an extremely progressive type of infection even though closed drainage was instituted. There are several factors which should be considered. First, a tube could have been introduced into the chest earlier, second, the dose of the drug could have been larger, third, the transfusions could have been fewer with a more careful check of the blood count.

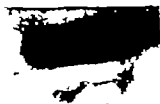


FIG 17, CASE 7 Congestion of the lower right chest with accumulation of fluid in the pleural cavity

There was no time during the course of this boy's illness when he presented even a fair risk for any type of drainage but I feel that as long as it was done eventually, it could have been performed earlier but we hesitated because the exudate was watery in consistency

Case 7—F M, female, aged 20 Buffalo General Hospital

1/25/38 She contracted a cold but continued her school work for a week in spite of constant headache, malaise, and a dry, hacking cough accompanied by blood-streaked sputum

2/1/38 Complained of severe attack of pain in the right chest and right side of her back with chilly sensations She continued to raise rusty sputum and called a physician

2/3/38 Admitted by ambulance Examination revealed a rather poorly developed, undernourished, acutely ill adult white female Temperature 105 F, pulse 130, respirations 30 There was no cyanosis nor marked dyspnea Marked injection of the nasopharynx, tongue dry and coated, anterior cervical nodes were palpable Examination of the chest revealed impaired resonance of the right side posteriorly diminished breath sounds and high-pitched prolonged inspiration. There were fine rales present in the aforementioned area Left chest was negative as was the remainder of the physical examination Hemoglobin 88 per cent, r b c 3 760 000 w b c. 19,850, polymorphonuclears 88 many bands and juveniles Because of a

family history of tuberculosis, she had a biannual chest x-ray in the outpatient department Blood culture taken on February 3, 1938, reported sterile after five days Portable radiographic examination of the chest revealed congestion in the right lung, especially in the lower two-thirds, which was considered a pneumonic process



FIG 18, CASE 7 Complete re-expansion of the lung some pleural thickening present infiltration about the hilus

2/4/38 Sputum examination revealed presence of pneumococcus type VI and streptococcus hemolyticus

2/5/38 Sulfanilamide therapy was begun

2/6/38 Temperature rose to 106 F, pulse 140, respirations 30 and there was some cyanosis She was put in an oxygen tent and 50 per cent glucose was given intravenously

2/8/38 A Keidel tube filled with yellowish cloudy fluid withdrawn from the right pleural cavity This was negative on direct smear but on culture yielded a pure growth of hemolytic streptococcus

2/10/38 Patient's condition continued to be desperate, there was found to be consolidation in the upper part of the lower lobe with fluid at the base and displacement of the heart to the left Radiographic examination of the chest showed a marked density of the entire right chest displacing the trachea to the left

2/14/38 Sulfanilamide determination in the blood 27 mg per cent, in the chest fluid 30 mg Seven hundred and twenty cc of clear

yellowish fluid removed from the right chest which was sterile on culture

2/17/38 There were still signs of consolidation, but the voice sounds were coming through more clearly and, anteriorly, the resonance was markedly improved. Temperature had gradually fallen to normal, although the pulse remained at 120. Patient was allowed out of oxygen for part of the day and seemed quite comfortable.

2/19/38 Sulfanilamide determination in the blood 13 mg

2/21/38 No fluid was obtained on aspiration in several different areas

2/26/38 Patient had a temperature of 101 F and 102 F on two occasions, but there was a phlebitis from the intravenous administration. Chest was aspirated through a large caliber needle, nothing was obtained, except a small amount of fibrin. Direct smear showed scattered leukocytes, but no organisms. This was sterile on culture. X-ray examination of the chest still revealed an opacity at the periphery of the right chest extending from the first rib down to the diaphragm. There was no fluid level seen and this area had diminished to one-half of its previous size.

3/1/38 Patient's general condition was reported as excellent. Temperature showed only an elevation of one-half degree daily for the past week, however, there was an area of dullness roughly conforming to the right interlobar fissure.

3/19/38 Patient had been sitting up in bed and had felt very comfortable, except for an occasional pain in the right chest. Pulse had dropped to 80, respirations were normal, temperature showed a daily rise of one-half degree. Expansion of the right chest was limited somewhat and the percussion note slightly impaired over the base from the ninth interspace down. The breathing sounds were also slightly diminished in this area.

3/24/38 Dullness and egophony in the region of the fissure, posteriorly. Leukocytes 6,800. X-ray still revealed a congestion in the region of the middle lobe.

4/25/38 Patient's condition showed gradual improvement, although the x-ray film still showed a density in the region of the middle lobe with no change in the physical findings. Temperature had been normal for the last week.

5/9/38 Improvement continued, temperature remained normal, physical findings were negative, x-ray film showed a diminution in the size of the density in the region of the interlobar fissure.

5/17/38 Patient discharged, having gained

fifteen pounds in weight, although the x-ray film still showed a density in the region of the interlobar fissure.

8/26/38 Admitted to the J N Adam Memorial Hospital with sputum positive for tubercle bacilli, and a lesion in the right chest.

## Comment

This patient was extremely ill and a very poor candidate for any type of drainage. Although her empyema was very definite, and her treatment not particularly intensive, she made a complete recovery from her empyema with the drug by mouth alone.

In view of the subsequent developments, it is fortunate that drainage was not done, because there might easily have been a persistent sinus with a chronic empyema, as a result of her tuberculous infection.

## Discussion

Cases 1, 4, and 7 represent proved cases of hemolytic streptococcal empyema. In all 3 there appeared to be an active pneumonic process at the time the empyema was diagnosed and treatment with the drug was instituted. These all recovered without drainage. Case 2 was particularly instructive to me because on entering the pleural space, I found an empyemic cavity present which contained no fluid pus, but merely some plastic exudate in small amounts, which yielded a growth on culture medium very slowly. Following removal of the tube after four days and continuance of the drug, the convalescence continued rapidly. It was our impression that we had instituted drainage in a late case that was proceeding toward convalescence. In Case 5 also the drainage tube was removed after three days but there was no recurrence of the empyema. Case 6 apparently represents an instance in which the drug had no influence over the infection as does our recent case reported in brief.

Whether or not this series of 7 cases above reported is large enough to draw conclusions is open to considerable question. It is difficult to accumulate a very

much larger group in the short time that has elapsed since the use of this drug was instituted. These represent all the instances that occurred on two fairly active services over a period covering two years and four months. It happens that the majority of these cases occurred in the year 1937 when we were just beginning to use the drug in streptococcal pneumonias. There was only 1 case in the Buffalo Children's Hospital during 1938, which fact seemed quite unusual, and during this period the drug was used much more routinely in the children having what was thought to be streptococcal pneumonia. Roughly speaking, the streptococcal pneumonia admissions in 1938 were twice as many as in 1937. In spite of this fact the percentage of empyema in the 1937 cases was five times as great as in 1938. Up to date there has been only 1 case this year that is not included in the series, because it is a recent admission and is still in the hospital. This occurred in a 6-year-old child developing an empyema following what appeared to be merely an upper respiratory infection. Cloudy fluid, positive for hemolytic streptococcus was obtained from the pleural cavity on admission. Four Gm of sulfanilamide daily were given by mouth. Although the fluid remained consistently positive, it was noted that the growth was retarded on the culture medium and did not appear for forty-eight hours. The sulfanilamide content of the chest fluid reached 6.6 mg per cent and the blood 97. The temperature reaction was effected little, if any, by the drug. Closed drainage was performed and convalescence is satisfactory.

Although no conclusions can be drawn from these facts, it is our intention to follow carefully future admissions in an effort to ascertain whether or not the incidence of empyema complicating streptococcal pneumonia in children is less than that which occurred in the years before the use of this drug. It is apparent that its effect is not uniform in all cases and it is likely there will be failures in any series of cases. We feel, however,

that it is possible to cure hemolytic streptococcal empyema in certain cases without drainage through the use of this drug and that convalescence may be shortened in cases that are drained. Delay while awaiting a cure should not preclude drainage to the point where the patient's life is endangered. Graham observes in commenting on the progress of thoracic surgery: "It seems probable also that the use of sulfanilamide in the streptococcal cases (empyema) may prove to be very beneficial."

The method of administration in our cases was only by mouth and intramuscularly. We have had no experience with the intrapleural method but feel that it might have some merit in certain instances, although the percentage of the drug in the pleural fluid can be raised to rather high levels without introducing it directly as shown in our recent case above reported. It has not been our experience to have ever seen a case of hemolytic streptococcal empyema spontaneously cured or to have them recover by aspiration alone. This fact gives added significance to the cures reported.

Sulfanilamide has been used also in the treatment of pneumococcal empyema. McIntosh reports 1 case of a type III infection, Basman and Perle report 2 cases of a type I infection without a favorable influence observed from the use of the drug. Bahrddt mentions no good results in pneumococcal empyema. Sulfapyridine has been used in the treatment of pneumococcal empyema. Barnett and co-workers report 2 cases due to type I pneumococcus and note a fall in temperature, decreased toxicity, general improvement of the patient, but in each instance the only effect observed on the fluid in the pleural cavity was that it thickened more slowly.

Flhppin, *et al.*, in reporting 100 cases of typed pneumococcal pneumonia, treated with sulfapyridine, were interested in ascertaining the possible influence of the drug on the instance of empyema. They did not encounter this complication in any of the cases included in the report but in a later instance had



one case in which empyema developed, necessitating open drainage

My personal experience is limited to one instance, which was that of a child with type XIV pneumococcic empyema that was intensively treated with sulfapyridine. In spite of this the cultures remained positive. The interesting feature of this case was that the fluid was of a thin watery consistency with practically no sediment during treatment. Following discontinuance of the drug, it thickened over a period of two days so that the sediment reached 50 per cent and open drainage was instituted. This agrees with Barnett's findings and if borne out by future observations, should have an important clinical bearing on its use.

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### Discussion

Dr. William J. Orr, *Buffalo, New York*—It should be noted in the cases just reported that empyema had already developed at the time treatment with sulfanilamide was instituted. In a limited experience, we have not observed that empyema developed in streptococcus pneumonia when sulfanilamide was started early in the course of the disease. Though this observation is made on a very limited number of cases, it may have a favorable significance in materially reducing the relatively high incidence of empyema following streptococcic pneumonia.

Since children tolerate sulfanilamide therapy

with very few unfavorable reactions, we have not hesitated to administer the drug in relatively large doses when the occasion warranted. About 1 gr. of the drug per pound of body weight is usually sufficient to raise the drug concentration in the blood from 8 to 12 mg. per 100 cc. In the cases of empyema just reported, similar doses of sulfanilamide were employed and the concentration of the drug in the pleural exudate ranged from 6 to 10 mg. per 100 cc.

Postponement of pleurotomy during the time the drug is being administered should have no adverse effect on the course of the disease even though in some instances it may be ineffective as it is usually employed during the period that one would ordinarily wait for the fixation of the mediastinum and the thickening of the exudate. If no favorable response is noted in the pleural fluid at the end of seventy-two hours of therapy, it is doubtful that further continuance of the drug will prove effective in promoting relief without pleurotomy.

Further continuance of the drug after pleurotomy, may have a favorable effect on the character and duration of the drainage.

In aspirating the pleural fluid, care was taken to withdraw only enough fluid to be used for a bacterial and chemical analysis. We did not wish to be accused of curing the patients by repeated aspirations of large quantities of fluid.

In the past few months, we have had an opportunity to observe the effect of sulfapyridine on the course of pneumococcus empyema. Six cases were treated with the drug after empyema had developed, with no favorable effect in the course of the disease. All cases received large doses of the drug. The concentration in the pleural exudate varied considerably from what we had observed in streptococcus empyema treated with sulfanilamide. Considerable difficulty was encountered in maintaining the concentration of sulfapyridine in the pleural fluid at a fixed level. Variations from a trace to 6 mg. per 100 cc. occurred. In no instance were we able to render the pleural exudate sterile, though the growth of organisms on culture media was materially reduced.

A phenomenon observed in all cases was a tendency for the fluid to remain serous and not thicken as is the rule in most cases of pneumococcus exudates.

Empyema did not develop in any of 30 cases of pneumococcus pneumonia that were treated with sulfapyridine. It is impossible to state just what significance this observation has in a small series of cases, but in a control series of a similar number of cases, 1 case of empyema had occurred.

## DISTINCTIVE ODOR IN PATIENTS RECEIVING SULFANILAMIDE

SIDNEY LEIBOWITZ, M D , New York City

(From the Medical Service, Beth Israel Hospital, New York City)

**D**URING the past year, in patients receiving sulfanilamide a distinctive odor has been noted. This odor is most easily detected in the breath, but at times pervades the room and sometimes appears to be part of the general body odor. It can best be described as a fairly pleasant, sharp, fruity odor, somewhat akin to acetone but distinctly different from it and usually stronger.

At first this was a chance observation in a patient with meningitis receiving sulfanilamide. The odor was then thought to be due to acetone, but, interestingly, acetone was never found in the urine. This was true even in the case of 2 patients who were diabetic and who were being given sulfanilamide for other reasons. One of these patients, suffering from a type III pneumococcus pneumonia, was in diabetic ketosis shortly before the administration of the drug was begun, but at no time during the period that she received the drug (when the odor was noted) could acetonuria be detected.

After the first chance observation, the odor was looked for in patients receiving the drug and consistently it was found. The route of administration varied, some oral, some rectal. The time after ad-

ministration when the odor was first noted also varied from several hours to two days, so that a direct quantitative relationship is not necessarily indicated, although the dosage in these cases varied a good deal. In 1 case the patient had received only two doses of 15 grains when the odor was detectable when one entered the room. In this particular case, it was predicted that sulfanilamide had been given to the patient, a prediction that was verified by the patient's private physician. The odor seemed to disappear gradually over the course of one to three days after cessation of administration of the drug.

The cause for this odor is not known at present. In several patients the mouth hygiene was poor and the possibility of a local decomposition of the drug in the mouth suggested itself. But several patients presenting the odor showed an excellent state of oral hygiene. The drug itself is tasteless and odorless.

The observation may prove of some value. At least one practical application suggests itself in the possibility of detecting that the drug has been administered when one has no previous knowledge of the fact.

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### NOW HE MUST TAKE HIS MEDICINE

Mario Spino of 102 Third Avenue, New York City, said by police to have mulcted a number of physicians of various sums by fraudulent representations, was arrested in January following his apprehension by an alert doctor.

Specifically Spino is charged with stealing \$1,000 in silverware and furs from the home of Dr. Frank Discepolo of 95 Lexington Avenue.

Last December Spino went to the home of Dr. Discepolo and proposed that he become staff physician of an Italian society subsequently found to be nonexistent. A few days later Dr. Discepolo's home was entered and the furs and silverware—wedding gifts to the physician and his bride—were taken.

Detective Thomas Harris, suspicious that Spino had worked his spurious association game on other doctors, asked the Academy of Medicine to notify its members of Spino's racket. A description of the man was supplied.

Then Spino called at the office of Dr. J. C. Andriola at 231 Sherman Avenue. He gave his name as Mario Lombardi and invited the doctor to become the staff physician of his fraudulent society.

Recognizing Spino from the Academy's description, Dr. Andriola induced "Lombardi" to remain in his office while he slipped out, ostensibly on a short errand. Dr. Andriola returned with a patrolman and Spino was locked up.

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in children because of parental ignorance play such an important role in the precipitation of behavior problems of childhood, its chief concern must of necessity be with the pre-school child and with parental education

Now what about the special technics utilized in child guidance work? In order to open discussion of this often-asked question we should like to refer to a definition of mental hygiene formulated some years ago by the late Dr Frankwood E Williams, for many years director of the National Committee for Mental Hygiene, who said, "Mental Hygiene is the art of application of knowledge derived from certain basic sciences to the maintenance of individual mental health. Mental health should not be interpreted too narrowly as merely freedom from disease but broadly in the sense of behavior and the ability to attain and maintain satisfactory human relationships. This ability depends upon the potentialities of the individual for physical, intellectual, and emotional growth on the one hand and opportunities for growth on the other" [Mental Hygiene 11 (No 3) (July) 1927]

Child guidance, therefore, is not a science. For its working knowledge it calls on several sciences. In the light of such scientific knowledge it attempts to understand the individual and his capacities in the several panels of his total personality as well as the opportunities and limitations of the environment in which he lives. Hence the need for the utilization of the many agencies and institutions which comprise that environment in order to achieve a successful solution for the individual's problems. We might therefore say, insofar as it uses available scientific information, child guidance is scientific, and that its technic is a cooperative or combined technic.

One might well be asked, "Specifically, what types of cases or problems are the natural concern of these clinics?"

Many uninformed individuals have the mistaken idea that the clinic is interested in and useful for only the mentally defective. While the facilities afforded by

a clinic may lend themselves admirably well for mere diagnosis of mental deficiency, the scope of its purpose is much broader, as it concerns itself with the utilization of educational, industrial, and social settings which make possible a satisfactory adjustment in the community in spite of the mental deficiency. Hence, its interest in special educational programs for the abnormal or backward child

The problem of mental deficiency is, therefore, not a major concern of the clinic

A much more interesting group are the children with no intelligence defect but who express their maladjustments by delinquent behavior. In these cases the function of the clinic is to gain a thorough understanding of the personality of the child from a study of his instinctive, emotional, intellectual, social, and biologic life, and the relationship of these to his offense and to attempt to evaluate them as to whether they are assets or liabilities with special reference to rehabilitation

Only a well-organized child guidance clinic is prepared to carry out such a comprehensive handling of the situation

And more important still than the two groups just mentioned are the perhaps more common and certainly more neglected group which shows only minor conduct disorders or who may be said to have personality traits which, although not producing definite antisocial behavior, nevertheless do bring them into more or less serious conflict with the environment.

We believe that personality traits result from the attempt of the child to solve his problems

The trait so established, if satisfactory to him and to those about him, may be considered a healthy one. If this is not so, conduct disorder results and naturally the greater the number of unhealthy traits present and the smaller the number of compensatory, healthy, or balancing traits present, the more does the behavior lean toward delinquency

Needless to say, the earlier these undesirable traits are corrected the more favor-

# THE FUNCTION OF A CHILD GUIDANCE CLINIC

HARRY A. STECKEL, M D, Syracuse, New York

(Director, Syracuse Psychopathic Hospital)

**N**EEDLESS to say, I deem it a privilege to be afforded the opportunity to present a paper on child guidance before the section on Public Health, Hygiene, and Sanitation. To me, it is most pleasing, because it indicates that the work of the founder of the mental hygiene movement in this country has not been in vain and that after some thirty years the prevention of mental diseases assumes the same importance to our public health officials as do physical hygiene and sanitation. Without doubt, it bespeaks a superlative vision and a broad concept of purpose on the part of those same officials which augurs well for the future of all our public health activities.

One gets the impression that mental hygiene as a movement was impeded by the fact that it originated in the field of psychiatry—for so many years regarded as a stepchild of medicine—and that it was therefore, as such, not always too gently or sympathetically treated. Today, however, there seems to be a growing recognition of the important part which the emotions, mental attitudes, and environmental stresses play in the total reactions of the human being, that more and more the psychiatric or psychobiologic point of view creeps into the practice of medicine and now finds itself welcomed into the field of preventive medicine.

In view of the fact that the child guidance clinic looms large in any community mental hygiene program, a definition of what such a clinic is seems in place at this point of our discussion.

A psychiatric clinic which devotes its time exclusively to work with children is generally designated as a child guidance clinic. Its chief aims and purposes are the diagnosis and treatment of the be-

havior and personality problems of childhood.

Such clinics have been a natural outgrowth of psychiatry, since our study of psychoses and their beginnings in the adult has revealed the fact that the personality defects which lead to psychosis are the result of faulty training during the early formative period of life and that therefore any worth-while effort at prevention must begin before pernicious pattern reactions are too firmly set.

The field of preventive activities is not, however, confined to mental disorders alone, for educators, criminologists, and social workers in many other fields in their efforts toward prevention have found need for the type of service afforded by the child guidance clinic.

The primary function therefore of the clinic is to correct mental deviations in their incipency, to establish a mentally healthy environment for the child, and to promote among adults a better understanding of the needs of the child for healthy mental development.

In order to accomplish this broad purpose the clinic tends to develop its own resources and organization, to study and treat the more difficult individual problem cases, and to help the community to deal with the less complex problems through its own already existing resources.

Inasmuch as many behavior problems are caused by social or environmental factors rather than by personality difficulty inherent in the individual, it can readily be understood why the clinic must rely upon many social groups and organizations in the community in the final adjustment program of the child. Furthermore, because parental ignorance and early attitudes and habits produced

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 26, 1939*

more directly contributory to the deficiency, than his inherent endowment

5 Children with *early* organic defects or toxic reaction types

6 Children with specific disabilities

The importance of early diagnosis and treatment which Dr Steckel has stressed cannot be overemphasized. The value of adequate thorough case recording as preparation for a scientific approach, long-term study, and future reference cannot be denied.

Dr Albert B Siewers, *Syracuse, New York*—Fifty years ago medicine made rapid strides under the influence of the concept of cellular pathology. Psychiatry got lost in the shuffle, as more than 50 per cent of the psychiatric cases have no cellular pathology to go with it. A new discipline had to be developed, and it is no better exemplified anywhere than in the work of a child guidance clinic.

The preventive aspect is certainly a most im-

portant one, and the influence of the clinic on the environment might well deserve a little further consideration. "Ability to bear children does not carry with it the ability to bring them up." The mother who is in contact with the child guidance clinic on account of one child learns something which she might apply to the rest of her children, or in her philosophy of living.

I from personal prejudice, feel that the school system is the proper place for a child guidance clinic, and certainly a psychiatric hospital which deals with prevention, is also a proper place for a child guidance clinic. In any given situation, it is simply a matter of working in with the existing setup in such a way as to provide the community what it needs in the way of child guidance and preventive psychiatry. As "childhood is the golden age of mental hygiene" a preventive program must be applied as early as possible. The nursery school might well develop into a prechild guidance clinic.

## WORKMEN'S COMPENSATION

**T**HE following plan of procedure was recommended by the Industrial Council at its meeting held on January 8, 1940, in cases where a difference of opinion exists between the attending physician and the examining physician employed by the employer or insurance carrier, as to whether or not further treatment is required.

1 The employer or insurance carrier must exercise their right to have a medical examination made of a compensation claimant by their medical examiner, on which a direction to the attending physician to stop treatment must be based.

2 A request forwarded to the attending physician to stop treatment must be accompanied by a report of the medical examiner employed by the employer or insurance carrier setting forth the physical findings.

3 If the attending physician does not agree with the findings of the medical examiner, he must arrange to confer with the medical examiner for the purpose of reaching an understanding.

4. If the attending physician and the medical examiner are unable to agree, a joint examination of the claimant should be arranged for the purpose of comparing the findings of both the attending physician and the medical examiner.

5 If an agreement cannot be reached on the joint examination, arrangements should then be made to refer the claimant to a mutually agreeable consultant.

6 When a difference of opinion still exists in such cases where the above procedure is followed, such cases shall be referred to the Department of Labor for medical examination or for a hearing at which the attending physician or the consultant shall be subpoenaed to appear by the Department of Labor.

In any case where all the physicians agree that no further treatment is necessary, but where the patient himself demands further attention, procedure No. 6 is recommended. Please report to your Workmen's Compensation Committee any failure on the part of an employer or insurance carrier to cooperate.

DAVID J. KALISKI, M.D., *Director, Bureau of Workmen's Compensation,  
Medical Society of the State of New York*

able the prognosis. Hence, the greater interest of the child guidance clinic in the preschool child as compared to the older age groups.

And this consequently leads us to the consideration of parental guidance and education as, in a way, a byproduct, yet strictly speaking, a primary and important function of the clinic.

Parents are a most important component part of every child's environment. Because of the responsibility which parents assume in the nurture and admonition of the growing child and the many pitfalls which present themselves in child training, the importance of parenthood can be readily recognized, yet very few make any serious effort to prepare themselves for this most important job in the world.

Many parents take the stand that self-defeating traits appearing in their children are the result of inherent disposition or arise from physical or nervous defects which cannot be altered. Some may try to obtain scientific information from the many modern psychological schools of thought and become involved in a maze of contradictory theories which only tend to confuse them.

And finally, the larger number of parents merely drift along, assuming that competent parenthood is a sort of mysterious endowment which nature presents to them as an accessory talent upon the arrival of the child. The fallaciousness of this assumption is only too evident, and parents should be encouraged to attempt some earnest and real preparation for this all-important work.

Certainly, no better source of reliable information on the scientific training of children can be found than the child guidance clinic, as here the parent will be advised not in generalities but upon a strictly individualistic basis with due regard for all factors involved in the specific parent-child relationship.

Furthermore, in view of the constant contact which the clinic makes with social agencies in the community the workers of these organizations are constantly sensitized to the psychiatric point of

view so that they too become more effective as they approach their jobs with psychobiologic insight.

Hence we recognize the educational feature of the clinic as one of its most important functions.

In conclusion, may I say how happy I am to have had this opportunity of welcoming the prospect of a closer union between psychiatry and preventive medicine, recognizing of course, the child guidance clinic as an outgrowth of the psychiatric point of view and emphasizing childhood as the most fertile field in the prevention of mental disorder as well as in the matter of progressive and scientific human engineering.

In this brief paper I have tried to outline the outstanding purposes and functions of a child guidance clinic. It will be self-evident that such a clinic becomes a potent factor for good in any social group, large or small, and that every progressive community should make it a component part of its public health program.

## Discussion

Dr Eugene Davidoff, *Syracuse, New York*—I am appreciative of the opportunity to discuss Dr Steckel's timely contribution. Dr Steckel has amply demonstrated the importance of the mental health of the child in relation to the more general aspects of his hygiene and has crystalized these early influences, which, until recently, physicians have been aware of only moderately.

I wish merely to reiterate Dr Steckel's remarks concerning the various types observed in the early stages of development where some measure of success has attended efforts at readjustment.

- 1 The child with early personality and emotional disorders in which the child yields to his more infantile impulses in adjusting to environmental influences—the neurotic child.

- 2 The child who attempts to protest against environmental as well as infantile emotional forces but who has arrived at a faulty, socially frowned upon, more primitive solution—the child with early delinquent traits.

- 3 The child who is influenced by poor economic and social conditions.

- 4 The mentally defective child—where the environmental and emotional influences are

tain the greatest efficiency and health, we must adjust, to a greater or less extent, the food (fuel) of the body to the occupation (work)

Our food, after eating, undergoes digestion, fermentation, and putrefaction. The undigested, unassimilated protein residue undergoes alkaline putrefaction, the undigested residue of the carbohydrates and fats undergoes acid fermentation. The proper balance, therefore, must be definitely maintained between the food materials (proteins, fats, and carbohydrates) to prevent the preponderance of overacidity or overalkalinity within the intestinal canal. An improper food adjustment results in autointoxication and disease. Unfortunately, most people eat too much of one or the other of these foodstuffs. A properly balanced diet will chemically and physiologically balance itself within the intestinal tract.

The normal fermentation within the stomach, brought about by the bacteria present within that organ, is definitely and commonly known to be the result of the activities of the various acid-forming bacteria. Lactic acid is, by most authorities, considered to be a normal acid of the stomach, because of its constant presence. Butyric acid is formed in milk during gastric digestion as the result of the action of the *Bacillus butyricus*, after lactic acid is formed. Alcohol is changed within the stomach by the action of the fungus of acetic acid (*Mycoderma aceti*) into aldehyde and acetic acid. Glucose is acted upon by yeast (*Saccharomyces cerevisiae*) and split into carbonic acid gas and alcohol. These examples of fermentation show that bacterial action enters into the cause of different types of fermentation within the stomach. The action of certain bacteria present in the gastrointestinal tract probably is part of the physiologic workings of these organs, and part of what we assume to be the normal digestion of different nutrient material.

We may presume that there is more or less injury to the inside of the intestinal canal from the presence of bacteria, food, and toxins. The cause of the injury then, we believe, lies, not so much within the

intestinal wall, as in the intestinal content.

The indefinite pathologic, etiologic, and clinical classification of the diarrheas of infants has provided a confusion of therapeutic procedures. Observation, in many instances after death due to severe alimentary diseases, will show that there were seldom marked changes in the intestinal mucosa, and that the pathology of the intestinal wall had less to do with the fatal termination than severe toxicity. The production of so-called food injury with "protein intolerance," "carbohydrate intolerance," or "fat intolerance," all of which are supposed to be definite gastrointestinal phenomena associated with excessive peristalsis, can only be due to an improper intestinal flora.

Commonly, excessive acidity with rapid peristalsis will indicate an undue fermentation of the carbohydrates and also show the presence of undigested proteins and fats. A strong laxative may produce an artificial food intolerance, and as a result there will be found present all three of the food classes, in varying stages of digestion.

Bacteria are living organisms which require food for their existence, which must be of a kind most suitable for their nutrition. Those which thrive best on proteins produce an alkaline end product, which favors the development of bacteria requiring that reaction, and the type which grows most favorably on carbohydrates produces an acid end product which is most suitable for bacteria which thrive in an acid medium.

The prognosis of an inflammatory appendix may be dependent upon the virulence of the type of bacteria predominating within the intestinal tract to a greater or less extent, because of the culture medium provided by the previous variety of food and its imperfect digestion. An excessive protein diet will produce a preponderance of either streptococci, staphylococci, or *B. welchii*, and a too abundant diet of carbohydrates will produce an acid type of intestinal content favoring the development of colon bacilli. The biologic action of the *Bacillus butyricus* on fats may increase fermentation



# THE RELATION OF FOOD TO NONSPECIFIC ULCERATIVE COLITIS

MARTIN L. BODKIN, M.D., F.A.C.S., Brooklyn, New York

(Consultant, Rectal Surgery, St. Catherine's Hospital, Brooklyn)

THE etiologic factors giving rise to the simple catarrhal diseases of the intestine are considered, generally, as the result of deficient physiologic action, directly or indirectly, which is followed by pathology within the intestine. Our clinical knowledge is most perfect but the origin of these common diseases is indefinite and dependent largely upon the laboratory for further elucidation.

Metchnikoff popularized the idea of introducing desirable types of bacteria into the intestinal canal when the beneficial types were inactive, or of re-enforcing the weakened residual type with suitable cultures in the form of Bulgarian buttermilk. The Bulgarian bacillus was selected because of its ability to produce a large amount of lactic and other acids without gas. The lactic acid produced was thought to be inhibitory in its action to the development of putrefactive organisms that are claimed to be retarded by acids.

This theory, however, is open to question, because acclimatization of the Bulgarian bacillus to the intestinal contents of man has been found impossible. The *Bacillus acidophilus*, a lactic acid-producing organism, is theoretically and practically the only parasite that we can logically select from the normal intestinal flora of the adult human being for its protective influence.

The Eskimos, living in a desolate unproductive area of the earth, are restricted mostly to the consumption of animal food. Their diet, devoid of the starches and sugars, offers a problem that presents contradictory evidence very interesting and unsolved as to intestinal bacteria.

The presence and propagation of the many indigenous bacteria in the atmosphere of the temperate zones that are favored by warmth, moisture, and an

abundance of suitable culture mediums can hardly be present in the extreme low temperatures of the arctic region and they are probably free from the destructive activity of these bacteria.

However, the study of the stratosphere which has recently shown us that bacteria are carried from parts of our country, miles high over intervening lands, to distant portions of the globe, may reveal some interesting discoveries among the Eskimos.

If we accept the theory of the existence of intestinal toxemia, then we must believe that autointoxication is brought about by abnormal digestive material which insidiously causes more people to suffer from premature senility, sickness, and death than any other factor. While alcoholism, infections, contagious diseases, and accidents are responsible for some of our human ills, consider the host of diseases such as rheumatism, arterial sclerosis, allergic, kidney, cardiac, appendicular, colonic, nerve, skin, and many other ailments that are directly or indirectly due to a derangement of the gastrointestinal tract, beginning as simple physiologic disturbances which result in disease.

The result of physiologic digestion is heat and energy. The chemical ingredients of the proteins, fats, and carbohydrates are vitally essential to life and form the ordinary diet or fuel upon which we have learned to subsist. A proper selection of these three foods is necessary.

Therefore, our food must be of a proper variety and quantity to be easily digested and assimilated to obtain the greatest efficiency in the bodily functions. Proteins are concentrated foods, easily digested and oxidized, the carbohydrates and fats are more slowly digested and assimilated. For these reasons, to ob-

hydrates presents symptoms of over-acidity, heartburn, sour-smelling feces with alternation of constipated or diarrheal movements, gas distention, red, swollen, or fissured tongue, headache, sour stomach, and malaise. Examination of the stool will reveal acid reaction and overpreponderance of Gram-negative bacteria of colon type. There will be a history of a lack of protein diet. They partake of either vegetables or non-meats such as cereals, vegetables, and fruits, and of fats in the form of meat soups and rich milk. The fats exaggerate the fermentation.

#### Feces Examination from Smear

Reaction ?

Gram-negative percentage?—(Normal 75 per cent)

Gram-positive percentage?—(Normal 25 per cent)

Bacterial types and relative percentage?

As an example the normal findings from a smear would be approximately as follows

Reaction	pH	7 0
Gram-neg percentage		75 per cent
B coli		65 per cent
Gram-neg diplococci		10 per cent
Gram-pos percentage		25 per cent
Anaerobic		15 per cent
Gram-pos diplococci		10 per cent

The proteolytic type very often presents sudden symptoms of toxicity sometimes without diarrhea. There may be coated tongue, foul breath, chill, rise in temperature, and obstipation. When this type presents itself in a less severe or chronic form, these symptoms of auto-intoxication persist over a long period, generally associated with constipation and its sequelae. The flora shows a decided preponderance of Gram-positive bacilli, alkaline in reaction, including *Bacillus aerogenes capsulatus* and *Bacillus lactis aerogenes*, the staphylococcus and streptococcus are also to be noted. Toxic albumoses may be found to produce auto-intoxication, including vasomotor disturbances caused by the products of imperfect protein metabolism.

The treatment of the nonspecific type of colonic diseases has become a biochemical problem from the observations of the bacteriologists. From Kendall,

Herter, Rettger, and many others who have studied the relation of food to bacteria in the intestinal canal, we draw conclusions that proteins, fats, and carbohydrates enter the intestine and are changed by the action of ferments, bacteria, and heat to become end products of nutrient material, besides many known and unknown chemical combinations and toxins. The presence of amino acid, histidine, and the toxic amine histamine is due to bacterial action. The *B coli* acting upon amino acid tryptophane produces indol. Bacterial activity on certain sugars produces formic acid, and the *B coli*, acting on formic acid, results in sodium formate, and if the bacterial activity persists, a final conversion to sodium carbonate results.

In view of these findings, a strong presumption is warranted that we are correct in following the dictates of experience to the effect that the variety of food eaten for our sustenance is also nutrient material for certain types of bacteria, and that these bacteria cause chemical disintegration which yields known products.

It has been my experience that implantation of the *B acidophilus*, by excessive feeding or by instillation through the rectal tube, will fail. The benefit of either method is temporary if the proper pabulum is not introduced into the alimentary canal in the form of food, because the desired bacterial growth will not become permanent. The fundamental principle of feeding the patient for the propagation and stabilization of these bacteria within the intestine is necessary.

The chemical reaction also enters into the inhibition and growth of bacteria as already stated, so that the meat eater can be benefited by taking lactic acid solutions in the form of buttermilk, or acidophilus milk, which prevents the growth of putrefactive bacteria. The fermentor undoubtedly suffers from the overproduction of lactic acid and should eat less food which produces acids—counteract acidity by eating more than the habitual quantity of meats (proteins). Overeating of fats in any form will increase overacidity or overalkalinity and

or putrefaction but will not initiate either

### Normal Flora

#### I Saccharolytic

Normal carbohydrate preponderance of breast-fed infants

End product mildly acid

Gram stain shows *B. bifidus* (colon group)

*Bacillus bifidus*

#### II Saccharolytic

Normal carbohydrate preponderance of artificially fed (mixed diet) infants

End product moderately acid, sometimes slightly alkaline

Gram-negative stain shows *B. coli* preponderance

*B. acidophilus*  
*B. coli*  
staphylococci  
*B. welchii*

### Abnormal Flora

#### I Saccharolytic

Abnormal carbohydrate diet (mixed or nonprotein)

End product excessively acid

Gram-negative stain shows large number of *B. coli* group

*B. coli* in greater number than  
*B. acidophilus* staphylococcus  
*B. welchii*  
*B. mesentericus*  
Diplococci

#### II Proteolytic

Abnormal protein diet

Excessively alkaline

Gram-positive stain shows greater number of bacteria taking gram-positive stain

Gram-negative shows color group lesser number

*B. mesentericus* staphylococcus  
*B. welchii*  
*B. coli* — the latter as pure putrefactive bacteria  
Streptococcus  
Diplococci

Fat diet may increase either putrefaction or fermentation of intestinal contents  
Normal end product acid

The intestinal bacteria are prolifically propagated within the intestinal canal where conditions are most favorable for their growth, and there is no more ideal, combined incubator and culture medium conceivable to the bacteriologist. These bacteria procure their food within its walls and excrete their waste products into the intestinal canal.

Breast-fed infants supply the most perfect flora from which the study of the intestinal contents of human beings can be fundamentally made because of its simplicity. This type is constantly do-

minated by the *Bacillus bifidus* with a mildly acid flora and, therefore, presents the standard for investigation, whereas, following an increase of proteins there will result a lessening or suppression of the *Bacillus bifidus* and *Bacillus acidophilus*. Conversely, an increase of carbohydrates will cause a diminution in proteolysis.

When a child is not breast fed and a modified feeding substituted, we have introduced a food of relatively high protein and variable sugar contents that may be compared with adult food and the bacterial action will result in a type of flora much the same as is presented from the mixed diet. The changed food produces an entirely different growth of bacteria from the previously fed breast milk with its protecting harmless beneficial flora. These bacteria commonly make the intestinal tract of artificially-fed infants the recipient of nature's reproach by their great proliferation. The variety of bacteria thus cultured has never been determined by our bacteriologists.

Kendall regards the intestinal flora as a physiologic unit rather than a collection of bacteria and states that the common colon bacillus forms 75 per cent of the bacterial contents. This latter portion of his statement, that 75 per cent of the bacterial contents is composed of Gram-negative bacteria, has been proved by my investigations.

In the adult, the *Bacillus mesentericus* and *B. coli* are found to be the most persistent of the intestinal bacteria. The flora are classified generally as the facultative (normal), fermentative (acid), and proteolytic (alkaline).

Porter and others classify the types of inflammatory diseases of the intestine among children as follows: mild, fulminating, grave, chronic, and putrid diarrhea. These types are presented in the adult identically as Porter and his co-workers have found them.

The differential diagnosis of the types of the intestinal flora varies with the amount of proteins, fats, and carbohydrates taken as food and the subsequent proper or improper digestion of these essential foods. Overindulgence in carbo-

# Case Reports

## THE RELIEF OF SOME CASES OF EYE DISCOMFORT

HOMER L. BRYANT, A.M., M.D., Rockville Centre, New York

(From the Eye Department, Jamaica Hospital, New York City)

**M**ANY persons who have normal vision i.e., 20/20, with or without correction, suffer some eye discomfort. In some of these cases aniseikonia (asymmetry of visual images) is thought to exist but has been shown not to be present. Such cases have been relieved by the correction of a small amount of astigmatism which existed, although they had 20/20 vision.

Persons who use their near vision a great deal, such as school teachers, are mostly affected. Soon after using their eyes for near vision, headache, eye ache, photophobia, and reading discomfort appear.

### General Discussion

It is the author's opinion that this reading discomfort is caused by the eye attempting at all times to produce the best possible image on the retina. Because of the small amount of astigmatism, the eye is constantly focusing in first one meridian and then another in an attempt to produce the best image. It is this constant focusing that brings about the symptoms described herein.

In practically all of these cases nervousness is a prominent symptom.

Since all these cases are alike as far as symptoms are concerned, only 2 case reports will be given.

### Case Reports

Mrs. M. B., white, schoolteacher, aged 38, complained of extreme eye discomfort when correcting school papers. She had been refracted many times and has very acute vision, with no astigmatic correction.

Her complaints were that after using the eyes for near vision, headaches, eye ache, extreme photophobia, and reading discomfort became so bad that she would have to stop her work and rest her eyes.

It was thought that, because of the patient's acute vision with no astigmatic correction, aniseikonia existed. She was examined thoroughly for aniseikonia which was found not to be present. However the symptoms continued.

The author refracted her under homatropine, and found a slight amount of astigmatism in each eye, which was corrected.

She took the following prescription O.D. plus 1.12 combined with plus 0.25  $\times$  80, O.S. plus 1.12 combined with plus 0.25  $\times$  110.

Vision was 20/20, with or without the astigmatic correction, but was a little more distinct with the astigmatic correction. She was given her full correction and her symptoms were relieved.

Mrs. R. M., white, aged 34 was a minister's wife who did a great deal of reading and fancy work.

Her symptoms were extreme nervousness, photophobia, headaches and eye aches. She had been refracted to 20/20 vision, her glasses contained only a plus 0.25 cylinder for each eye.

She was refracted under homatropine and was found to take the following correction O.D. plus 1.25 combined with plus 0.50  $\times$  135, O.S. plus 0.87 combined with plus 0.50  $\times$  40.

She was given her full correction, which corrected all her astigmatism, and since then she has been relieved. Her nervous condition also improved markedly.

### Conclusions

The author is satisfied that a correction of 20/20 vision does not always properly correct the patient or make for eye comfort. It is important to examine these cases carefully for astigmatism and correct any small amount which might be present.

In other words, 20/20 vision does not necessarily mean comfort. The author noted, in practically all of these cases, a change in the disposition (personality) of the persons, especially an improvement of their nervous condition.

### References

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2. Ames, A. Jr. Gliddon G. H. and Ogle, K. N. Arch. Ophth. 7 576-597 (1932)
3. Carleton E. H. and Madigan L. F. Arch. Ophth. 7 720-738 (1932)
4. Ames, A. Jr. Gliddon G. H. and Ogle, K. N. Arch. Ophth. 7 904-924 (1932)
5. Ames, A. Jr. Gliddon, G. H. and Ogle, K. N. Annals of the Distinguished Service Foundation in Optometry 1 46-60 (1932) 1 61-70 (1932)

must be taken sparingly except by those whose labor is very hard

The human body is a machine, and, in order to function properly, needs a definite kind and individual quantity of fuel for its vitality and ultimately to create energy, just as the man-made machine can only consume a definite quantity of fuel in the attainment of its maximum efficiency

In other words, it matters little as to the quality of the food we eat if properly balanced and we select a variety of foods which are digestible. A perfectly digested meal will result in only a small undigested residue to serve as a culture medium for a harmful number of bacteria

### Summary

1 The presence of bacteria within the intestinal canal is beyond question

2 The entrance of bacteria from outside the body, in relatively small numbers,

is also undoubted, but the propagation and stabilization of bacteria within the bowel, over long periods, show that their existence is dependent upon the contents of the intestinal canal

3 Animals select their own kind of food and vary their diet only through necessity and parasitic life behaves in a similar manner in choosing its food

4 The cultivation of the different types of bacteria is not dependent upon the food we eat and digest properly, but upon that portion of the food we eat and do not digest properly. It is this undigested, unassimilated portion that affords a favorable pabulum for bacterial consumption

5 Logically it stands as a fact, that we can lessen or increase the relative proportion of intestinal bacteria by an unbalanced or undigestible diet. Therefore, if we change the diet, we change the bacterial contents

## Annual Meeting

May 6, 7, 8, and 9, 1940

New York City

**T**HE Waldorf-Astoria is the headquarters. Special rates have been arranged of \$6 to \$8 for single rooms with bath, and \$9 to \$11 for double rooms with twin beds and bath. Reservations should be made at the earliest moment in order to secure these low-priced rooms. Attention of the membership is called to the fact that the various sessions follow one another very closely, and therefore those who register at headquarters will run no risk of missing any portion of the meetings.

The Scientific Program and the description of exhibits, both scientific and technical, will appear in the April 1, 1940, issue of the *New York State Journal of Medicine*. This year the booklet program will not be mailed, but copies will be available for all who attend the meeting.

Certain Scientific Exhibits may be installed beginning Friday, May 3, but all must be in place by noon, Monday, May 6. It is necessary that all be removed not later than noon of Friday, May 10. Any information desired by exhibitors may be secured from Dr. Byron E. Farwell, 122 East 76th Street, New York City, the local member of the committee in charge. His telephone number is RHineland 4-3727.

All members should register at the desk in the Silver Corridor. In past years a number have neglected to do this, and it is essential that the record be full and accurate.

PETER IRVING, M D  
General Manager

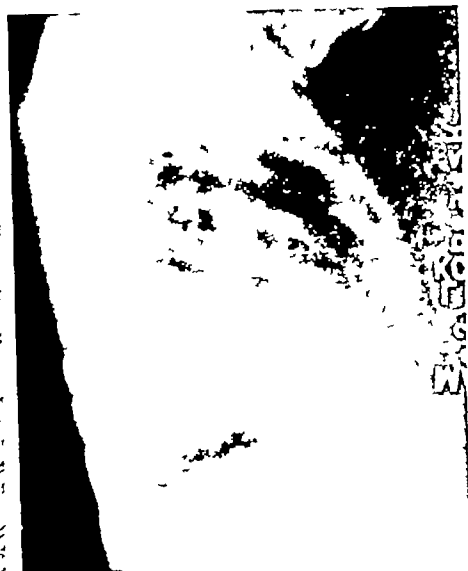


FIG 3 Lateral view of chest on March 9, 1937, eight days after admission, showing the encapsulated empyema on the right posterior wall.

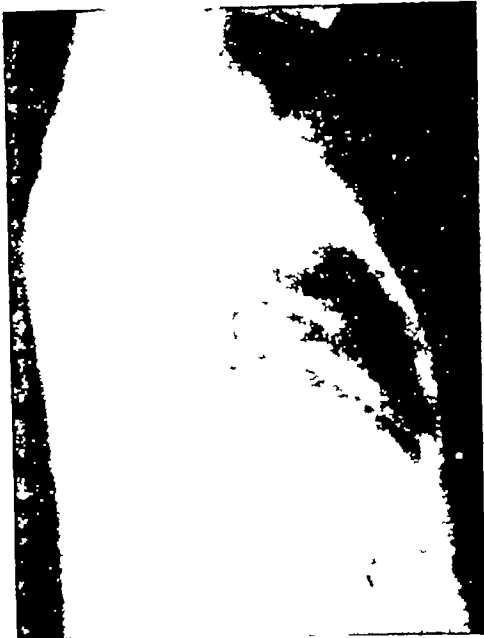


FIG 4 Lateral view, taken on same day as Fig 2. Study of this roentgenogram, and of the one illustrated in Fig 3, strongly suggests an encysted posterior wall empyema, which has partially emptied, showing a fluid level.

The first plate (Fig 1) was described as an early lung abscess. All early anterior-posterior views were interpreted as lung abscess (Figs 1 and 2). Lateral views, however (Figs 3 and 4), indicated that we were probably dealing with an encysted posterior wall empyema, which had ruptured into a bronchus. Subsequent roentgenograms showed gradual clearing. Fig 5 is one taken five months after discharge from the hospital, and illustrates complete healing with no apparent pulmonary or pleural residua.

#### Summary

An acute encysted pyothorax, located on the right posterior chest wall and complicated by bronchopleural fistula, responded favorably to conservative treatment by oral drainage. The roentgen findings simulated the appearance of a lung abscess.

#### References

1. Ochsner A. and Gage, I. M. *Ann Surg* 84: 25-37 (July) 1931.
2. Bettmann, R. B. and Crohn N. N. *JAMA* 91: 1987-1988 (Dec. 22) 1928.
3. Broadbent, W. *Practitioner* 136: 747 (June) 1936.
4. Roch, M. *Presse méd.* 43: 1759-1760 (Nov 9) 1935.



FIG 5 A P view taken nine months after clinical recovery reveals no pulmonary or pleural pathology.

Visitor "Do you know sir, that's a swell looking nurse you have?"  
Patient "I hadn't noticed."

Visitor "Good gracious, man, I had no idea you were so sick"—*Bulletin of the Burcombe County (N. C.) Medical Society*

## BRONCHOPLEURAL FISTULA

## A Report of a Case Complicating an Encysted Pyothorax with Unusual Roentgen Findings

BERNARD L. PACELLA, M D, and GEORGE E. BROCKWAY, M D, Brooklyn, New York

*(From the Department of Pediatrics, Kings County Hospital)*

**B**RONCHOPLEURAL fistula complicating acute pyothorax is reported to have an incidence of 10 to 15 per cent.<sup>1,2</sup>

Bettmann and Crohn,<sup>2</sup> and Broadbent,<sup>3</sup> observed that nearly all empyemata which rupture into a bronchus are interlobar.

Roch,<sup>4</sup> and others,<sup>2,3</sup> concur in the opinion that surgery is usually necessary in the treatment of this complication.

This case is reported because it is an example of a bronchopleural fistula complicating an encysted empyema which was not an interlobar collection, but was located on the posterior wall of the thorax, because of the unusual roentgen findings which resembled a lung abscess, and because of the complete recovery with conservative treatment by oral drainage.

## Case Report

A white boy, aged 11 years, was admitted to the Kings County Hospital, March 1, 1937. He complained of a painful, dry cough and fever. These symptoms appeared suddenly seven days prior to admission. The onset was preceded by two days of headache, loss of appetite, fatigue, and vomiting.

On admission, the boy's temperature was 102 F, pulse 130, respirations 34, chest examination disclosed a moderate impairment to percussion, diminished tactile fremitus, and bronchovesicular breathing over the right lower lobe. The heart was not enlarged nor was there any shift in its

position. Our diagnosis was an incompletely resolved pneumonia accompanied by thickened pleura.

On March 4, three days after admission, the boy complained of severe pain in the right mid axillary region, which radiated to the angle of the scapula. The pain was accentuated with cough and deep respirations. At this time there were definite physical signs of a right pleuritic effusion. In 48 hours, the pain subsided.

On March 8, 1937, the cough became productive, and there was frequent expectoration of mucopurulent sputum. A bronchopleural fistula complicating an encysted effusion was suspected. A 1 per cent methylene blue solution was injected into the right pleural cavity, and within four minutes a blue-stained, purulent sputum was expelled. The purulent expectoration continued in gradually diminishing amounts until March 16 when it ceased entirely. The patient rapidly improved and convalescence was uneventful. On March 25, 1937, physical and roentgen examination of the chest revealed normal findings. A follow up study for one year revealed no subsequent abnormal lung or pleural findings by physical or roentgen examination.

The roentgen findings illustrate how readily they can be confused with those of a lung abscess.



FIG 1 A P view taken March 2, 1937, one day after admission into hospital. Note the suggestion of abscess formation with fluid level on right.



FIG 2 A P view taken March 11, 1937, ten days after admission into hospital. There is a marked increase in the size of the apparent abscess formation on the right. Fluid level can still be seen.

## Hearings

Feb 20 { S Int. 134—Warner }  
 { A. Int. 152—Milmoie } Sale of fireworks—joint hearing before Codes Committees

There follows a list of the bills taken up by the Legislative Chairmen's Conference on February 7, with action indicated upon each bill

## Approved

S. Int. 10—Williamson

S. Int. 115—Wicks

S. Int. 134—Warner

A. Int. 152—Milmoie

S. Int. 167—Phelps

A. Int. 161—Walsh

S. Int. 240—Young

A. Int. 477—Vincent

S. Int. 253—Hastings

A. Int. 323—C. D. Williams

S. Int. 310—Hastings

A. Int. 322—C. D. Williams

S. Int. 314—Condon

A. Int. 499—Gans

S. Int. 508—Desmond

A. Int. 695—Vincent

S. Int. 599—Condon

A. Int. 833—Armstrong

S. Int. 792—Page

A. Int. 878—Todd

A. Int. 103—McCaffrey

A. Int. 141—Dollinger

A. Int. 192—McLaughlin

A. Int. 1005—Wagner

S. Int. 199—Desmond

S. Int. 304—Martin

S. Int. 484—Wicks

S. Int. 510—Feinberg

A. Int. 476—Steungut

S. Int. 765—Gutman

S. Int. 842—Kleinfeld

A. Int. 461—Austin

S. Int. 856—Graves

A. Int. 1106—G. F. Daniels

A. Int. 94—L. Bennett

A. Int. 150—Goldstein

A. Int. 330—Boccia

A. Int. 469—Goldstein

A. Int. 470—Goldstein

A. Int. 619—Peterson

A. Int. 646—Dollinger

Nurses of Army and Navy Corps, veterans' preference in civil service positions

For regulating practice of optical dispensing

Sale of fireworks (approved in principle but objected to the date of enactment being postponed until after July, 1940)

Workmen's compensation, physical examination of injured employees (approved with amendment that physicians representing both carrier and employee must be present or else neither of them may be present)

Sale of narcotics

Instruction for physically handicapped children (approved provided provisions under sections c, d, and e, which provide that classes be created for (c) orthopedic crippled children, (d) cardiopathic children, and (e) children suffering with nervous disorders, be deleted)

Children with impaired hearing, New York City—physicians' reports

Injured employees, physicians to file verified reports

Practice of radiology

Workmen's compensation, medical fees

Nurses, extend time for securing licenses

Workmen's compensation, physical examination of injured employees (approved with amendment suggested for S. Int. 167, A. Int. 161)

Sale of fireworks

Sale of fireworks

Creating consumers' bureau in Health Dept., etc. (approved in principle)

## Bills Opposed

Creating commission to study trichinosis (disapproved because the Department of Health has sufficient personnel to make any studies of this character that may be required)

Labor law, creating division of the deaf (disapproved because there seem to be too few persons that would be considered by such division and present provisions are believed to be adequate)

Establishment of cancer clinics (disapproved because the amendment to the Public Health Law enacted last year, establishing the Division of Cancer Control, gives the Department of Health authority to assist communities and hospitals throughout the state in creating and conducting cancer clinics)

Workmen's compensation, authorization of medical bureaus and laboratories (opposition to this bill was centered about that section of the amendment which would take the laboratories out from under the immediate conduct of physicians and provide that they might be supervised by a physician. It was believed that eventually the laboratories, or clinics as we are accustomed to calling them, would be conducted much as they were before the enactment of the present law)

Employment of psychologists, etc., in cities and school districts

Relative to bureaus of child guidance

Sale of ice cream

City of New York, hospital records

Examination of hospital records

Hospital records as evidence

Long-range health program

Lotteries for public health purposes

Intoxicated drivers (disapproved because accurate tests are difficult, if not impossible)

Assistance to the tuberculous



# Legislative News

Bulletin No 5

(February 9, 1940)

## New Bills Introduced

**SENATE** Int 842—Kleinfeld, requires New York City Education Board to establish child guidance bureau Referred to the Education Committee

**COMMENT** Same as Assembly Int 461, reported in Bulletin No 3 Disapproved by Chairmen's Conference

**Senate** Int 856—Graves, Assembly Int 1106—G F Daniels, requires a permit from the State Health Commissioner for sale of ice cream after inspection of cows, barns, and manufacturing equipment, to determine that sanitary conditions and milk standards are maintained, also requires permit for importing evaporated or condensed milk sold in hermetically sealed cans when intended for use in manufacture of ice cream, fees are imposed for the expenses of inspection Referred to the health committees

**COMMENT** Disapproved by Chairmen's Conference.

**Senate** Int 927—Page, provides that applicants for medical licenses who meet requirements as to preliminary and professional education with evidence of successful practice or professional experience and with evidence satisfactory to State Education Commissioner that they have been duly licensed in another state or territory of the United States, may receive licenses without further examination, provision relating to applicants who matriculated in New York State medical school before June 5, 1890, being stricken out Referred to the Education Committee

**COMMENT** The Department of Education suggests that an amendment which would require that the credentials of every person applying with a license from another state for its endorsement be thoroughly studied, including the preliminary education and professional education, as well as the questions and rating of the licensing examination, to see that both of those were equivalent to what was required in New York State at that time This will terminate automatic reciprocity and will very likely decrease the annual number of licenses endorsed

**Senate** Int 968—Phelps, Assembly Int. 1219—Wagner, provides that after July 1, 1941, instead of 1940, it shall be unlawful to practice nursing without being duly licensed and registered, increases from 7 to 12 the minimum membership of state board of examiners for nurses, with four to be selected from each of three lists submitted by certain nurses' organizations, and makes other changes. Referred to the education committees.

zations, and makes other changes. Referred to the education committees.

**COMMENT** The three nurses' organizations mentioned are the New York State Nurses' Association, which is authorized under the law at present to submit lists, and to this is added the Nurses' Union and the American Federation of Registered Nurses The bill was not acted upon by the conference because printed copies were not available for study

**Assembly** Int 1117—Wagner, requires that city education boards and school districts maintaining vocational schools, shall provide health service for pupils attending vocational high schools, with necessary personnel to afford physical examinations and x rays Referred to the Education Committee.

**COMMENT** The Chairmen's Conference approved of this measure except that portion which requires that all of the children be x rayed as to their chests They felt that children in vocational schools should have the same advantages as children in high schools, and since x raying of the chest is not required but is being done voluntarily in some schools, they felt that no such requirement should be included in this bill

**Assembly** Int 1122—Shaw, provides for free treatment of persons suffering from poliomyelitis by local health authorities, where person is unable to pay for such care, one-half of cost is to be paid by county or in New York City by the city and the other half by the State, \$30,000 is appropriated Referred to the Ways and Means Committee.

**COMMENT** Disapproved by the Chairmen's Conference.

**Assembly** Int 1126—Quinn, requires druggist or pharmacist, upon request, to furnish a true and complete copy of a refillable prescription to the person for whom it was filled Referred to the Codes Committee.

**COMMENT** Disapproved by the Chairmen's Conference

**Assembly** Int. 1181—Goldstein, makes it unlawful for agent or officer of public hospital to refuse to admit private patients willing to pay for facilities or to deny licensed physician or surgeon permission to attend and prescribe for any patient therein Referred to the Codes Committee.

**COMMENT** This bill was not available for consideration by the Chairmen's Conference on Wednesday, but identically the same bill was before the Legislature last year and was disapproved by the committee.

## Action on Bills

S Int 258—Hastings Physically handicapped children  
S Int 310—Hastings Care of deaf children  
S Int 599—Condon Workmen's compensation, physicians' fees

S Int 792—Page Nurses, extend time for securing licenses  
A Int 195—Vincent Criminal Code, drug violations  
A Int 878—Todd Nurses, extend time for securing licenses

Passed Senate, in Assembly Ed  
Com 3rd reading  
Passed Senate, in Assembly  
Labor Com  
Reported  
Passed both houses  
Passed Assembly, 3rd reading in  
Senate

## Hearings

Feb 20 { S Int. 134—Warner }  
 { A. Int. 152—Milmoie } Sale of fireworks—joint hearing before Codes Committees

There follows a list of the bills taken up by the Legislative Chairmen's Conference on February 7, with action indicated upon each bill

## Approved

S. Int. 10—Williamson

Nurses of Army and Navy Corps, veterans' preference in civil service positions

S. Int. 115—Wicks

For regulating practice of optical dispensing

S. Int. 134—Warner }

Sale of fireworks (approved in principle but objected to the date of enactment being postponed until after July, 1940)

A. Int. 152—Milmoie }

S. Int. 167—Phelps }

Workmen's compensation, physical examination of injured employees (approved with amendment that physicians representing both carrier and employee must be present or else neither of them may be present)

A. Int. 161—Walsh }

S. Int. 240—Young }

Sale of narcotics

A. Int. 477—Vincent }

S. Int. 258—Hastings }

Instruction for physically handicapped children (approved provided provisions under sections c, d, and e, which provide that classes be created for (c) orthopedic crippled children, (d) cardiopathic children, and (e) children suffering with nervous disorders, be deleted)

A. Int. 323—C D Williams }

S. Int. 310—Hastings }

Children with impaired hearing, New York City—physicians' reports

A. Int. 322—C D Williams }

S. Int. 314—Condon }

Injured employees, physicians to file verified reports

A. Int. 499—Gans }

S. Int. 508—Desmond }

Practice of radiology

A. Int. 695—Vincent }

Workmen's compensation, medical fees

S. Int. 599—Condon }

A. Int. 833—Armstrong }

Nurses, extend time for securing licenses

S. Int. 792—Page }

Workmen's compensation, physical examination of injured employees (approved with amendment suggested for S. Int. 167, A. Int. 161)

A. Int. 878—Todd }

Sale of fireworks

A. Int. 108—McCaffrey }

Sale of fireworks

A. Int. 141—Dollinger }

Creating consumers' bureau in Health Dept., etc. (approved in principle)

A. Int. 192—McLaughlin }

A. Int. 1005—Wagner }

## Bills Opposed

S. Int. 199—Desmond

Creating commission to study trichinosis (disapproved because the Department of Health has sufficient personnel to make any studies of this character that may be required)

S. Int. 304—Martin

Labor law, creating division of the deaf (disapproved because there seem to be too few persons that would be considered by such division, and present provisions are believed to be adequate)

S. Int. 484—Wicks

Establishment of cancer clinics (disapproved because the amendment to the Public Health Law enacted last year, establishing the Division of Cancer Control, gives the Department of Health authority to assist communities and hospitals throughout the state in creating and conducting cancer clinics)

S. Int. 510—Feinberg }

Workmen's compensation, authorization of medical bureaus and laboratories (opposition to this bill was centered about that section of the amendment which would take the laboratories out from under the immediate conduct of physicians and provide that they might be supervised by a physician. It was believed that eventually the laboratories, or clinics as we are accustomed to calling them, would be conducted much as they were before the enactment of the present law)

A. Int. 476—Steingut }

Employment of psychologists, etc., in cities and school districts

S. Int. 765—Gutman }

Relative to bureaus of child guidance

S. Int. 842—Kleinfeld }

A. Int. 461—Austin }

S. Int. 856—Graves }

Sale of ice cream

A. Int. 1106—G F Daniels }

City of New York, hospital records

A. Int. 94—L Bennett }

Examination of hospital records

A. Int. 150—Goldstein }

Hospital records as evidence

A. Int. 330—Boccia }

Long-range health program

A. Int. 469—Goldstein }

Lotteries for public health purposes

A. Int. 470—Goldstein }

Intoxicated drivers (disapproved because accurate tests are difficult, if not impossible)

A. Int. 619—Peterson }

Assistance to the tuberculous

A. Int. 648—Dollinger }

A Int 981—Peterson  
A Int. 1117—Wagner

A Int 1122—Shaw  
A Int 1126—Quinn

Practice of chiropractic  
Establishment of physical examinations and health service in vocational schools  
Polioomyelitis, free treatment for certain persons over twenty-one  
Refillable prescriptions

#### No Action

S Int. 4—Williamson }  
A Int 16—Hill }  
S Int 13—Bewley }  
A Int 46—Whitney }  
S Int 18—Warner }  
A Int 77—Hollowell }  
S Int. 97—Graves }  
A Int 79—Allen }  
S Int 313—Mahoney }  
A Int 295—Butler }  
S Int. 355—Gutman }  
A Int. 241—Wagner }  
S Int 475—Ryan }  
A Int 466—Devany }  
S Int 608—Phelps }  
A Int. 10—Crews }  
S Int 709—Condon }  
A Int 986—Washburn }  
A Int 183—Holley }

State employees' retirement system, benefits  
Sales tax  
Sale of spiritous liquor to children  
Sale of adulterated or misbranded foods  
Commission to make study of feeble-minded individuals  
Division of Industrial Hygiene in Labor Department  
Commission to study care of youth  
Relative to persons working under compressed air  
Workmen's Compensation Law, include volunteer firemen  
Manufacture and sale of adulterated drugs

JOHN L. BAUER  
LEO F. SIMPSON  
WALTER W. MOTT  
*Committee on Legislation*  
JOSEPH S. LAWRENCE  
*Executive Officer*

#### "THE FOUNDATION PRIZE" AWARD

The rules governing the award of "The Foundation Prize" of the American Association of Obstetricians, Gynecologists, and Abdominal Surgeons are as follows

1 The award which shall be known as "The Foundation Prize" shall consist of \$150

2 Eligible contestants shall include only (a) interns, residents, or graduate students in obstetrics, gynecology, or abdominal surgery, and (b) physicians (with an M D degree) who are actively practicing or teaching obstetrics, gynecology, or abdominal surgery

3 Manuscripts must be presented under a nom-de-plume, which shall in no way indicate the author's identity, to the Secretary of the Association together with a sealed envelope bearing the nom-de-plume and containing a card showing the name and address of the contestant

4 Manuscripts must be limited to 5000 words, and must be typewritten in double spacing on one side of the sheet. Ample margins should be provided. Illustrations should be limited to such as are required for a clear exposition of the thesis. Submit three copies of thesis and illustrations to the Secretary

5 The successful thesis shall become the property of the Association, but this provision shall in no way interfere with publication of the communication in the journal of the author's choice. Unsuccessful contributions will be returned promptly to their authors

6 All manuscripts entered in a given year must be in the hands of the Secretary before June 1

7 The award will be made at the annual meetings of the Association, at which time the successful contestant must appear in person to present his contribution as a part of the regular scientific program, in conformity with the rules of the Association. The successful contestant must meet all expenses incident to this presentation.

8 The President of the Association shall annually appoint a committee on award, which, under its own regulations shall determine the successful contestant and shall inform the Secretary of his name and address at least two weeks before the annual meeting.—JAS R. BLOSS, M.D., *Secretary*, 418 Eleventh Street, Huntington, West Virginia

#### BEATS ELECTRIC BELTS

Struck by lightning in January, a California justice of the peace says it cured his arthritis. Quite a lot of folks have had all their troubles ended by this treatment.

#### ON A FALSE SCENT

A doctor says he can tell a lot about patients by the shape of their nostrils. But we expect there have been occasions when he has made wrong diagnoses.—*Punch*

# Medical News

## County News

### Albany County

Dr Conrad Wesselhoeft, associate professor on communicable diseases at the Harvard Medical School and Harvard School of Public Health, spoke on "Advances in Management of Infectious Diseases" before the scientific session of the Albany County Medical Society in the Albany Pharmacy College on January 24.

The discussion following Dr Wesselhoeft's talk was opened by Dr Otto A Faust and Dr Charles K. Winne, Jr.

### Chemung County

Although adequate medical and dental care is available in Chemung County if requested, city physicians are overworked and cannot give sufficiently close care to people on relief, there is too much routine required before hospital service can be obtained by relief patients and the situation is complicated by new relief laws and additional burdens, there are sufficient medical facilities for indigents of the community, but borderline-income groups suffer.

These are some of the conclusions of a just-completed county-wide survey of the medical needs of Chemung County. The study was conducted by a committee from the Medical Society of Chemung County and the Health Division of the Elmira Council of Social Agencies at the request of the American Medical Association. Chemung County was selected as a test spot in this district, results to be included in a national survey of medical needs and recommendations.

Approximately 273 question blanks were submitted to institutions and organizations concerned with health work in the county.

Less than half responded by supplying answers, a fact which prevents results from being conclusive.

Those contacted and total returns compare as follows: physicians and dentists, 106 contacted 35 replies, hospitals, 5, 4, nurses, 5, 4, health departments, 15, 3, welfare and relief agencies 32, 15, schools, 9, 9, colleges, 1, 1, pharmacists, 23, 16, other organizations, 77, 29.

To meet the needs discovered, some of those questioned favor voluntary sickness insurance, particularly for the middle class and poor not on relief, others believe that the work now done by the city physicians should be returned to private physicians at reduced fees.

Replies would indicate that hospital facilities are ample but that members of marginal income families do not receive adequate nursing care. Many, it is reported, forego such care rather than ask for free service.

An exposition of syphilis—its dangers known remedial measures, and responsibilities of the layman in curtailing its spread—was given for approximately 130 guests at a social hygiene dinner on January 31 at the Mark Twain Hotel in Elmira by Dr Paul Padget, syphilologist, instructor, and national consultant in syphilis from Johns Hopkins School of Medicine.

The dinner was jointly sponsored by the social hygiene committee of the Visiting Nurse and Tuberculosis Association and the Chemung County Medical Society in observance of the fourth annual Social Hygiene Day.

Dr Padget was introduced by Dr George R. Murphy, president of the county medical society. Dr Ross G. Loop, chairman of the medical advisory committee of the visiting nurse association, presided.

### Erne County

Formal opening of offices of the Non-Profit Western New York Medical Plan at 374 Delaware Avenue, Buffalo, and receipt of its operating permit from the New York State Insurance Department have placed the medical plan on the list of going concerns.

The new offices are in the Huyler Building and adjoining those of the Blue Cross Hospital Service Plan, the field staff of which will handle enrollment of subscribers throughout the area. Operating procedures will parallel those of the hospital plan, subscribers being accepted only on a payroll deduction basis.

Complete medical and surgical care is provided under the plan, with the following rates applying individual subscribers, \$18, for indemnification up to \$200, man and wife, \$27, for \$300 coverage, entire family (husband and wife and all unmarried children under 19 years of age), \$36, for \$400 coverage.

All payments for service are made directly to the participating physician by administrators of the plan and the physician's receipted bill is given the subscriber in satisfaction of the benefits due him under terms of his contract. These payments are computed on the basis of an official schedule of reduced fees and prorated on a unit basis.

Guarantee of subscriber benefits is made by the participating physician, who agrees to provide specified service regardless of the plan's ability to pay.

The acting board of trustees, consisting of twenty-five, includes sixteen physicians and nine laymen who were the original incorporators of the plan. They all serve without pay. The permanent board will be elected by the participating physicians and its membership will have such geographic distribution as is prescribed in the bylaws.

Included on the present board are prominent laymen throughout the Eighth Judicial District, in the eight counties of which the medical plan is chartered to operate: four past-presidents of the Erie County Medical Society, the president of the Buffalo Board of Health, and other leading physicians and surgeons of the district.

Under the welfare department's medical plan the state will reimburse Erie county 40 per cent of expenditures not exceeding \$82,100, Harold S. Tolley, state area welfare director, told the county welfare board on February 8.

The plan calls for payment to physicians for

medical services for welfare clients At present hundreds of physicians treat welfare cases without being recompensed

"Experience in other cities and states would indicate that adequate care could be provided for an amount not in excess of \$46,800," Tolley said "However, since the board has decided that the proposed plan better meets the needs of Erie County and is preferred regardless of possible higher costs, it seems reasonable to cite maximums beyond which no state reimbursement should be expected"

They are Physicians' fees, \$38,300, salaried physicians, \$9,600, pharmacists, \$5,600, drugs, \$6,400, and additional administrative staff, \$22,200

The area director declared no reimbursement could be expected from the state until the entire plan is in operation

Local welfare officials estimated the medical plan would cost \$146,000 annually

A symposium on anesthesia was presented by the Buffalo Academy of Medicine at its meeting on February 7 An allergy program was given on February 14

Chancellor Samuel P Capen announces that approximately \$425,000 has been provided for a new medical school building at the University of Buffalo

Dr Capen announced a gift of \$200,000 from Mrs DeWitt H Sherman, in addition to a bequest estimated at \$225,000 by her late husband, Buffalo pediatrician, whose will was offered for probate on February 7

Dr DeWitt Halsey Sherman, Buffalo pediatrician who died on February 1 at the age of seventy-five, had served for twenty years as professor of pediatrics in the University of Buffalo Medical School Dr Sherman was secretary and later president of both the Buffalo Academy of Medicine and the Erie County Medical Society He was an organizer of the New York State Medical Society and the fourth chairman of its section of pediatrics

#### Genesee County

An interesting offer was made by the Genesee County Medical Society to the city of Batavia in January, whereby relief families would be permitted to summon a physician of their own choosing, thus doing away with the office of city physician.

Headed by Dr Peter J Di Natale as chairman, the special medical society committee offered to handle welfare medical and surgical needs for \$4,300—the sum spent by the city for that purpose last year The committee would have prorated payments to physicians on the basis of services rendered

Also on file was a request from Dr Homer A Harvey, the city physician, for a salary increase from \$1,500 to \$2,250

Dr Harvey's salary last year did not include the cost of major operations or medical supplies, items which the physicians' committee covered in their \$4,300 proposal.

The common council, however, on February 7, turned down the physicians' offer and reappointed Dr Harvey at a salary of \$2,000

Dr George Critchlow of Buffalo, chairman of the Western New York Medical Indemnity

Insurance Corporation, spoke at a special meeting of the Genesee County Medical Society on February 8 in Batavia at the Hotel Richmond on the medical insurance plan offered to members of the Genesee County society

#### Herkimer County

The Medical Society of the County of Herkimer met at the Mohawk Valley Country Club on February 13 A scientific program was prepared by Drs Shults, Vickers, and Lill The latter made an address and Dr H van Z Hyde, of Syracuse read a paper on pneumonia

#### Jefferson County

The regular monthly meeting of the Medical Society of Jefferson County was held at the Black River Valley Club on February 8 There was a symposium on welfare by Ray S Dunaway, A E Cole, and Miss Angie L Kellogg A moving picture on "Trichomonas Vaginalis" was shown and was discussed by Dr James L Crossley There was a tumor clinic at Mercy Hospital at 5 00 P M

On January 6 the Black River Valley Club tendered a dinner for Dr Grosvenor S Farmer in honor of his ninetieth birthday There were over one hundred friends, many of them physicians, who attended the party Dr Farmer has been a member of this club for sixty years and still conducts some medical practice

#### Kings County

The forty-second annual meeting of the Associated Physicians of Long Island was held on January 27, at the Brooklyn Hospital

The scientific program at 10 00 A M comprised operative clinics in various departments of the hospital, 12 00 o'clock noon, inspection of the hospital, 1 00 P M, guests of the hospital at luncheon

At 2 00 P M the scientific session was held, at which the following papers were read and discussed "Conservative Surgery in the Treatment of Acute Osteomyelitis," Dr Ainsworth L Smith—Discussion, Dr Carl Hetteshimer "Thyrototoxicosis in Pregnancy," Dr J Thornton Wallace—Discussion, Dr Austin Johnson "Tendonitis of the Tendon of the Long Head of the Biceps Brachii Muscles," Dr Donald E McKenna—Discussion, Dr Frank S Child "Carcinoma of the Larynx—Demonstration of Patients Using Artificial Larynx," Dr Robert L Moorhead—Discussion, Dr Henry B Smith "The Diagnosis of Cardiovascular Syphilis—An Analysis of 20 Cases to Necropsy," Dr Edwin P Maynard Jr—Discussion, Dr Eugene Calvello

At 4 00 P M, there was a business meeting and election of officers At 7 00 P M, the annual dinner was held at the Montauk Club, 8th Avenue and Lincoln Place, Brooklyn

After the dinner a travel talk, illustrated with lantern slides, was given by Commander Frank W Ryan, Medical Corps, U S N, on "A Medical Man's Experiences in Samoa"

Dr Joshua Marsden Van Cott, president of the professional staff of the Brooklyn Hospital since 1930 and president of the board of trustees of the Hoagland Laboratories attached to the Long Island College Hospital, died on February 8 at his residence, 160 Henry Street, Brooklyn, at the age of seventy-eight.

He was a founder and fellow of the American College of Physicians, chairman of public health and education of the New York State Medical Society, 1912-1924, and vice-president of the same society, 1927-1928. He had been president of the Medical Society of the County of Kings in 1909, and in 1913 served on the advisory committee of the New York Board of Health. He was also a founder of the Associated Physicians of Long Island.

More than two hundred doctors attended an educational forum on February 5 under the auspices of the East New York Medical Society at the Temple Auditorium, Rochester Avenue and St. John's Place. Dr. Hyman I. Teperson, president, was chairman.

Development in the methods of treating the hard of hearing was discussed by several eminent physicians.

Dr. William Stevenson Applegate, a pioneer physician in Flatbush, where he practiced from 1887 until his retirement in 1913 and for fifty years a member of the Medical Society of the County of Kings, died on February 6 in his home on Vail Road, Parsippany, N. J., at the age of eighty-seven after an illness of three months.

When Dr. Applegate retired to devote his time to farming he was president of the Flatbush Medical Society.

Shortly before his death Dr. Applegate presented his medical books to the Medical Society of the County of Kings.

#### Madison County

The regular winter meeting of the Madison County Medical Society was held at the Hotel Oneida Oneida, on January 18. A dinner preceded the business and scientific session.

The program was as follows: "The Vaginal Discharge," by Sydney W. Stringer, "The Early Local Care of Traumatic Wounds, with Special Reference to Wounds of the Face," by Dr. Leon E. Sutton, "A Treatise on Vitamin Deficiencies," by Dr. Earle E. Mack, all of the above from Syracuse, and a "Technicolor Film on Physical Diagnosis," by Dr. Ernest Freshman, of Oneida.

#### Monroe County

Dr. John R. Murlin, University of Rochester physiology professor, was the principal speaker at a joint meeting of the Monroe County Medical Society, the Rochester Academy of Medicine, and the University of Rochester Medical School in the academy's auditorium, on January 28.

Dr. Murlin's subject was "The Place of Vitamins in Normal Nutrition." There was also a special showing of a sound motion picture. Dr. Murlin is director of the university's vital economics department.

#### Nassau County

The scientific program of the Nassau County Medical Society on January 30 was as follows: Topic and Speakers "Visualization of the Chambers of the Heart and of the Thoracic Blood Vessels" (A New Diagnostic Method) 1—Clinical Application in Heart Disease" by Dr. George Porter Robb, visiting physician, Cardiac Clinic, New York University College Clinic; clinical assistant visiting physician, Bellevue Hospital, instructor in clinical medicine, New York University College of Medicine. 2—

"Its Practical Value in Lung Disease," by Dr. Israel Stenberg, chief, Chest Clinic, Bellevue Hospital, chief, Chest Clinic, New York University College Clinic, instructor in medicine, New York University College of Medicine, physician-in-chief, Consultation Chest Clinic Department of Health, New York City (Kips Bay-Yorkville District).

The topic on February 27 was "Endocrinology in the Female," by Dr. Robert T. Frank, of New York, and the topic on March 26 will be "The Treatment of Arthritis, Practical Suggestions for the General Practitioner," by Dr. Loring T. Swaim, of Boston.

The Rockaway Medical Society celebrated its seventeenth anniversary on February 1 at Lawrence Village Park Inn, where a dinner was served. About seventy-five doctors from the Rockaways and neighboring Nassau villages attended. The evening was given over to sociability. There was no formal program.

"We cannot help feeling a sense of satisfaction in reviewing Nassau County's diphtheria record for 1939. Three cases were reported in January and 1 each during April, June, and October, making the county record a mere 6 cases for the entire year compared with 14 for 1938 or an average of 27 for the five years before 1939. Comparing a record of 6 cases and no deaths with one of 208 cases and 12 deaths in 1928, we are forced to the conclusion that the energetic campaign against diphtheria which has been waged by the county medical society since 1928 is, at least in part, responsible for this very dramatic improvement.

The present thinking among health authorities is that every child should be given at least two doses of toxoid at the age of nine months or as soon as possible thereafter. Then every child should be given another dose of either plain toxoid or alum precipitated toxoid at about the time of entering school."—*Nassau Medical News*

#### Onondaga County

A paper was presented at the meeting of the Onondaga County Medical Society on February 6 on "Obstruction of Alimentary Tract in Infants," by Dr. Samuel W. Clausen, pediatrician-in-chief of Strong Memorial Hospital and Rochester Municipal Hospital, professor of pediatrics of the University of Rochester School of Medicine and Dentistry. Discussion was opened by Dr. A. B. Raffil.

Dr. Frederick S. Wetherell was guest of honor at a dinner given by the staff of the *Bulletin* publication of the Onondaga County Medical Society and the Syracuse Academy of Medicine on January 23, in appreciation of his efforts and service as editor of the publication for three years.

During these first three years Dr. Wetherell did most of the work of reporter, editorial writer, advertising department, and editor. The *Bulletin* began as an eight-page publication published in Rochester, and has evolved to a booklet of twenty-eight pages with a circulation of 1,000 doctors and hospitals in central New York and is printed in Syracuse.

Dr. Wetherell is chairman of the publications committee of the Onondaga County Medical Society and, in his twenty-fifth year of connection with the staff of St. Joseph Hospital, is

president of that staff. He is a member of the publication committee of the *New York State Journal of Medicine*, and is a former member of the medical economics committee of the state society.

Dr Morris Fishbein, editor of the *Journal of the American Medical Association*, and Dr John Peters, professor of medicine of Yale University, discussed "The National Health Problem" at the Mizpah Auditorium on February 26, under the auspices of the Town Hall of Syracuse, Inc. An open forum was held at the end of the meeting.

The Syracuse Housing Authority has honored the medical profession of Onondaga County and its society by naming one of its pioneer courts in memory of John Howell Frisbie, first president of the Onondaga County Medical Society.

#### Queens County

The program of the Medical Society of the County of Queens on January 30 included "The American Health Program," by Dr Nathan B VanEtten, president-elect, American Medical Association "The Doctor Looks at the Citizen," by Dr Terry M Townsend, president, Medical Society of the State of New York.

Friday afternoon talks included February 2—"The Use and Abuse of Dehydrating Agents in the Treatment of Head Injuries," by Dr Jefferson Browder, neurosurgeon, Long Island College, Brooklyn, Kings County hospitals February 16—"Office Dermatology," by Dr Howard Fox, dermatologist, New York, Bellevue, Lenox Hill, Knickerbocker hospitals.

#### Orange County

Featured speakers at a health meeting in Goshen High School auditorium on February 13 were Dr Terry M Townsend of New York and Dr Frederic J Elliott.

Sponsored by the Twentieth Century Club of Goshen, the meeting was open to the general public. Also assisting in arrangements were the Orange County Medical Association and Orange and Rockland County Hospital associations.

Dr Theodore W Neuman of Central Valley, chairman of the county medical group's public relations committee, presided.

Dr Townsend, president of the state medical society, spoke on "Socialized Medicine," and Dr Elliott on "Medical Indemnity Insurance." Dr Elliott is secretary-treasurer of the Medical Expense Fund, Inc., which is organizing doctors for the insurance plan.

#### Oswego County

Dr Newton Cook, of Sandy Creek, who died at his home on January 7, had practiced medicine there since 1880.

#### Schenectady County

Dr Joseph E Connery, professor of hematology at New York University Medical School and attending physician at Bellevue Hospital, was the speaker at the meeting of the Schenec-

tady County Medical Society at Ellis Hospital on February 6. Dr Connery spoke on "Types, Diagnosis and Treatment of Anemia." He illustrated his talk with lantern slides.

There was a special luncheon meeting of the Schenectady County Medical Society on February 1, in the cafeteria of the Ellis Hospital, to hear Dr Paul W Harrison, F.A.C.S., of Arabia, on "Surgery Under Desert Difficulties." Dr Harrison has been a medical missionary for twenty-eight years, and has been responsible for pioneer work on hemorrhaphy and spinal anesthesia. He is the author of "The Arab at Home," and has been recently described in magazine articles as "The Desert Doctor."

#### Suffolk County

Cancer was the subject of the meeting of the Suffolk County Medical Society on January 31 at Friede's Inn at Smithtown.

#### Wayne County

The Wayne County Medical Society met on February 6 at the Hotel Wayne in Lyons and devoted the meeting to a discussion of pneumonia.

The speaker was Dr Henry van Zile Hyde. Dr Hyde is a member of the Pneumonia Speakers' Committee appointed by the Medical Society of the State of New York. He discussed the recent progress in treating pneumonia, especially with regard to serum treatment and sulfapyridine.

#### Westchester County

In the February issue of the *Westchester Medical Bulletin*, published by the county medical society, is a question addressed to the profession, but one in which all persons in this county, as well as throughout America should be interested, remarks the Tarrytown News. Here it is:

"Will American medicine soon be faced with the necessity for civil disobedience in the public interest?"

"It may be the only possible alternative in view of the political trend toward national socialism in this nation. Faced with a choice between regulation by its own code of ethics or obedience to embarrassing, encroaching, onerous, sumptuary, or even hostile legislation conceived for the advancement of social reforms, but in practice too restrictive of medical freedom of thought and action, what will the profession do?"

"The question must be answered."

In that answer will lie a most serious thought, says the Tarrytown editor, for not only the medical profession but the millions whom it serves.

Dr H G V Hunter was elected president of the White Plains Medical Society, at a special meeting January 30 at the Contemporary Club.

Other officers elected were Dr J R Montgomery, vice-president, Dr Harry Klapper, secretary-treasurer, and Dr Robert Towse and Dr Granville Knight, new governors for two years.

"Young Dr Jones seems to have considerable earning power."

"Yes, he does, but it doesn't equal his wife's yearning power."—*Rocky Mt Medical Journal*

# Across the Desk

## The Hard-Headed Yankee Nation Turned into Rainbow Chasers

LIFE is so hard nowadays that people believe some magic must and will turn it soft overnight. We are so dazzled by the myriad luxuries of civilization that we think we can live like kings on a dollar down and a dollar a week. Advertisements scream at us to come and borrow money. Not one rainbow but a thousand turn our sky to a blaze of glory, and the pots of gold seem in our inflamed imagination so plentiful as to make Fort Knox look like the poorhouse. No wonder the clever politicians have the nation running around in circles expecting Utopia by the wave of a wand.

The hocus pocus of today's "professional political charlatan," was the theme of a trenchant address before the Medical Society of the County of Kings on February 20 by Dr. Terry M. Townsend, president of the Medical Society of the State of New York, under the title, "Who Shall Lead the Leaders?" It seems that Dr. Townsend has been looking at the American citizen, and "it would be funny," he remarks, "were it not tragic, to trace the history of his befuddlement by one after another sweet singer of halcyon songs, who have played upon his weakness." For instance "First, we were to have a managed currency, to bring back prosperity, then, we were to have control of farm products, with plenty of money for the farmer through higher prices for his products, then unemployment was to be banished, we were to have peace and justice between labor and capital through a labor relations board. I do not need to weary you with the long list of ideal plans for perfecting this and that, all of which looked promising on paper but not one of which succeeded in practice in doing what it set out to do. There was one defect in all these plans. They left out the little matter of changing human beings in such a way as to permit the schemes to work. Now we have the newest hopeful promise—the others having failed—government medical care for all, with everybody healthy and relieved of the necessity for paying for it."

### Thimblugging the Citizen

Why is it, Dr. Townsend wonders, that when all these rainbows fade, the citizen still seems eager to be fooled by each new plan? He believes it is because these schemes offer the citizen an escape from the hard realities of life, just as phantasy does. They save him from realizing that the fault "is not in our stars, but in our selves that we are underlings." The citizen wants to believe he can work less and earn more, save less and have more, go in debt and not have to pay it. Even when the schemes fail, we do nothing, remarks Dr. Townsend. Why don't we turn the schemers out? The reason is significant. It is because "it is easier to think that we cannot do anything about it than to think that we can. Effort is avoided, and effort is painful. Most of us are seeking an easy way out of our problems."

Thimblugging the citizen is a clever game that goes merrily on, year in and year out. We are suavely assured by our leaders that we are living

under a "democracy." A radio program promoted by government agencies is styled, "Democracy in Action." A meeting has just been held in Washington on "Children in a Democracy." But, declares Dr. Townsend, "We are not living in a democracy at all, we are living under a form of representative government," and the representatives we elect, and who make our laws generally have but one guiding idea—to be re-elected. The people rarely, if ever, have the chance to vote on public measures—the very essence of democracy. The Washington "conference" on "Children in a Democracy" was all "framed weeks in advance", the material "was prepared by those who had their own special cause to plead, and no chance was given for all who might disagree with the points made, to prepare and present a contrary view." In a word, the conference may have been a good thing, but "it was not democratic, and did not deal with 'children in a democracy'."

### Nations in Padded Cells?

The psychiatrist could size up our rainbow chasers in ten seconds. The psychiatrist tells us, says Dr. Townsend, that the insane act as if no accomplishment were impossible, they recognize no limits to the granting of their needs, and they admit no authority or opinion so good as their own. When their environment refuses to alter at their command, "they take refuge in escape mechanisms to relieve the conflict. They cannot stand reality, so they take flight from it."

Not all the insane are in hospitals, remarks Dr. Townsend meaningfully, but, fortunately, not naming any names. Perhaps he includes us all when he observes that "everyone, to some extent, flees certain realities." But he would not cart us all to the asylum, for it is only when the mechanism which is substituted for reality becomes dangerous to others or to the patient himself, that he is removed from society.

But wait a moment, do not feel too safe. A whole nation may go gaga, to use a low form of expression. As Dr. Townsend more elegantly puts it, "Now there is a collective mechanism of escape as well as an individual one, we may have mass delusions, mass escapes." There is a mob psychology, strangely irrational, that has been often noted and mass reactions were never so common as today. "Television will give an added weapon to the spellbinder and the demagogue who wish to incite the nation to pursue this or that will-o'-the-wisp. Unfortunately," adds Dr. Townsend, there is no way to put whole nations into padded cells. They have to run riot until the crowd disease has spent its force."

You and I may think at once of some other nations, far, far away, that ought to be put in a cell with large pads and no exits, but it is only too evident that he means us. If we doubt it, that is just another of our delusions. And he knows no cure. "I hesitate to think," he says "that I could possibly know how to prevent what seems to be the operation of natural laws



Civilization moves in cycles. Man builds up his complex life, becomes corrupted by luxury, destroys his own civilization and weakens himself in so doing, goes again into darkness, to rebuild, after centuries, perhaps. Seeking, struggling, restless, foolish MAN!"

### Problem of a Cure

Materialism may be the root cause of the disease, hazards Dr Townsend. People are debating, quarreling, fighting about material possessions. If materialism is the cause, then spirituality, the very opposite, is the thing to counteract it. If greed and selfishness drive nations mad, rouse hatreds, ring the tocsin, and loose the dogs of war, then can we falteringly suggest that spirituality might be the antitoxin? Perhaps that would not be permissible. Dr Townsend states it better in these words:

"There are those who like to think that man is primarily a spiritual creature, and that the main purpose of living should not be to obtain goods and chattels, lands and buildings, but to attain to the good life, which is the inner life, as well pursued in poverty as in riches. False values, false goals, false ambitions, and, of course, false realizations, are the result. It is not a mere coincidence that in many countries where the people have been robbed of their freedom they have also been deprived of their churches.

"If there be a cure for the existing disorders, it may come when a courageous leader arises who will tell the people that the hard, thorny path to the only Utopia we can ever have on earth requires that we be honest and not evasive with ourselves, our problems, and our fellow man.

We cannot really escape our problems for the very good reason that *we* are our problems, each man is his own problem, each group is its own. When we accept these difficulties, instead of trying to escape them, and try to make ourselves more worthy, try to *give* more, rather than *get* more, perhaps the way out will be made clear."

### Pendulum Swings Both Ways

Various historical writers have noticed the interesting fact that the life of nations proceeds, as Dr Townsend notes, in cycles. The ebb of our moral tide is followed by a reverse flow, as day follows night and summer follows winter. Action and reaction are equal and opposite. After one era of political corruption a man of rocklike integrity was elected to one office after another in this state and then to the presidency so swiftly that when he went to Washington to be inaugurated it was the first time he had seen the city. After another, the youngest President ever elected rode into power on a wave of idealism and righteousness, while politicians sneered that he had "discovered the Ten Commandments." After a favorable word he had spoken, venders stood on street corners of New York City and sold quantities of Pastor Charles Wagner's book, *The Simple Life*. Such are the revulsions of feeling in our land of the free. It is not at all impossible that at this moment, somewhere between our eastern and western seas, the courageous leader that the president of our State Society is looking for is forging the sword that will win the battle for all of us.

W S W

### Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
William L. Allen	79	Albany	January 26	Unadilla
Newton Cook	85	N Y Univ	January 7	Sandy Creek
Melville D. Dickinson	71	Albany	January 30	Rockville Centre
Daniel P. Doyle	74	N Y Univ	February 9	Jamaica
Herman Drexler	—	Baltimore	February 7	Brooklyn
Max Erdheim	57	Fordham	December 9	Brooklyn
John L. Fisher	76	Jefferson	January 27	Owego
Otto Fuchs	—	L I C Hosp	January 28	Manhattan
Arthur Gunnever	74	N Y Hom	January 28	Manhattan
Clarence R. Hyde	69	L I C Hosp	February 9	Brooklyn
John Leuchs	82	Univ & Bell	January 21	Brooklyn
De Witt H. Sherman	75	Pennsylvania	February 1	Buffalo
George P. Thomas	64	Pennsylvania	January 30	Rochester
Joshua M. Van Cott	78	L I C Hosp	February 8	Brooklyn
Paul G. Weston	58	Med-Chur, Phila	December 18	Jamestown
George S. Whiteside	66	Harvard	January 29	Manhattan
Anna S. Wilner	66	N Y Inf Wom & Child	February 10	Rockaway Park

# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

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### The Wagner Hospital Bill

Two bills have been introduced in Congress in response to President Roosevelt's recent message on hospital construction. Senator Mead's measure includes hospital construction among a number of other projects for which federal loans are authorized. That sponsored by Senator Wagner closely follows the pattern of the President's message. Of the two the Wagner bill appears to have a more comprehensive grasp of the problem and a more precisely conceived solution.

Unlike other medical legislation proposed in recent years, the Wagner bill acknowledges the differences in medical needs in different localities. It promises hospitals only to communities requiring them and vests administrative power in the hands of local authorities.

In other words, a community would have to demonstrate its need before receiving a federal hospital. There would be no indiscriminate construction to compete with local institutions. Once built, the hospital would be leased to the community, maintenance and operation serving in lieu of rent.

Also to be praised are the provisions for expert supervision and consultation. The United States Public Health Service, not a lay bureau, is charged with responsibility for selecting hospital sites, approving construction plans, formulating standards of maintenance and operation, receiving reports, making inspections, and generally safeguarding the quality of service rendered. To prevent "political" administration and give the Surgeon-General the benefit of professional knowledge and experience outside official life, the bill creates a national advisory council of six members to be chosen from pre-eminent medical and scientific authorities. This advisory group would consider and recommend all applications for hospitals and collaborate closely with the Surgeon-General in the formulation and maintenance of satisfactory operating standards.

As the bill stands now, the advisory council would have considerable influence but no authority. More positive functions and a greater measure of control would increase its usefulness and mitigate the enormous responsibility placed upon the Surgeon-General.

Some of the provisions of the new Wagner bill are of questionable wisdom, for example, that combining "protection of the public health" with the duties usually entrusted to a hospital. These are minor matters, however, which can undoubtedly be adjusted in view of the approval the major provisions of the bill command.

Indeed, in this measure Senator Wagner appears to have avoided most of the faults of his so-called national health bill. Where the former called for enormous expenditures for theoretical, vaguely defined purposes, the hospital bill appropriates the relatively small sum of \$10,000,000. No large institutions will be built. Construction will be kept on a small scale until the program has had an opportunity to demonstrate its practicability and value.

As suggested above, the Wagner bill could be improved by increasing the powers of the advisory council, omitting functions not usually performed by hospitals, and providing for local medical participation in the approval of sites. On the whole, however, this measure adheres to the principles laid down by the medical profession for federal aid and will receive hearty support from the nation's physicians.

On the other hand, further clarification is in order regarding one portion of this bill. In Sections 9 and 10, there are provisions for additional commissioned officers and other personnel and *provision for the training of this personnel*. If an increase in the personnel of the United States Public Health Service is desired, Congress should explicitly be asked for it. Such a "rider" should not be included in this particular bill.

It is also important to know whether these hospitals are to be turned over to the doctors of the community to treat the sick of the area surrounding them, or whether the Public Health Service of the Federal Government is planning to fill them with its personnel. Perhaps this is but a thinly disguised effort to expand government medicine, allowing it to compete with private medical practice. Should this be the case, it must be made known to all of us. Before organized medicine takes any definite action in support of this bill these questions must be answered.

### Up to YOU

Although the State Legislature has power to alter the form and scope of medical practice, few physicians bother to communicate their views to their representatives at Albany. This apathetic atti-

life shows a surprising indifference to the fate of their profession. There are many occasions on which an unmistakable expression of professional opinion would have a decisive effect on the course of legislation affecting medicine. Yet the average practitioner is satisfied to sit back and let outside influence shape his destiny.

Politicians (and legislators are necessarily politicians) respond to the expressed will of the voters. When a group of citizens fails to make its wishes known, legislators cannot be blamed if they obey the mandate of more articulate voters. In this respect the voice of the individual is more effective than that of organizations. The legislator knows that he is elected by the ballots of individuals in his district and their opinions, therefore, count most heavily with him.

Physicians must learn to exercise their full political power in the interests of their profession and the public health. At the present time there are two measures pending in Albany which should be passed this year and can be if individual practitioners get behind them and push. The Desmond Vincent bill gives needed statutory protection to the practice of radiology. The Page-Milmoe bill regulates the endorsement of medical licenses granted in other states. Passage of these bills would strengthen the educational foundations of medicine by excluding unqualified technicians and graduates of inferior schools elsewhere from practice in this state.

There is no important opposition to either of these methods. Their adversaries can be shown to be more interested in obtaining or preserving advantages to which they are not entitled than in furthering the public welfare. Nevertheless, it is safe to predict that the will of a selfish minority will prevail unless the medical profession makes its voice heard.

Physicians have no right to complain of legislative apathy when they themselves are too indifferent to their own interests to make their views known to their representatives. The state and county medical societies are unceasingly active at Albany but they ~~cannot~~ carry the entire burden of legislative campaigning.

Make the Desmond-Vincent radiology bill and the Page-Milmoe medical license bill a test of your political influence. ~~Write~~ ~~phone~~, or telegraph at once YOUR representative ~~in~~ ~~favor~~ of these measures.

### Some Common Sense

Medical literature is replete with ~~advertisements~~ ~~and~~ ~~other~~ ~~things~~ ~~which~~ ~~are~~ ~~not~~ ~~of~~ ~~any~~ ~~value~~ ~~to~~ ~~the~~ ~~profession~~ ~~and~~ ~~which~~ ~~are~~ ~~only~~ ~~a~~ ~~waste~~ ~~of~~ ~~space~~ ~~and~~ ~~money~~. These columns, as well as ~~the~~ ~~other~~ ~~columns~~ ~~of~~ ~~this~~ ~~journal~~ ~~have~~ ~~editorialized~~ ~~the~~ ~~progress~~ ~~which~~ ~~has~~ ~~been~~ ~~made~~ ~~in~~ ~~the~~ ~~past~~ ~~few~~ ~~years~~ ~~and~~ ~~which~~ ~~is~~ ~~the~~ ~~result~~ ~~of~~ ~~the~~ ~~cooperation~~ ~~of~~ ~~all~~ ~~of~~ ~~us~~ ~~in~~ ~~the~~ ~~past~~ ~~few~~ ~~years~~. But, amid the voluminous ~~contributions~~ ~~which~~ ~~are~~ ~~made~~ ~~to~~ ~~this~~ ~~journal~~ ~~these~~ ~~achievements~~, there is ~~in~~ ~~the~~ ~~editorial~~ ~~only~~ ~~one~~ ~~column~~ ~~devoted~~ ~~to~~ ~~the~~ ~~discussion~~ ~~of~~ ~~the~~ ~~problems~~ ~~of~~ ~~the~~ ~~profession~~ ~~and~~ ~~the~~ ~~public~~ ~~health~~.

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## Current Comment

" Drivers who pass on curves and hills and otherwise disregard obvious traffic laws comprise a large part of our irresponsible population. They get (doctor's) bills but they don't pay them. Whether their obligations are 'enormous' or slight, they are passed by like other obstacles of the road"—The *Cleveland Bulletin* recently

. . .

"Much too often are the physician members of our medical societies prone to criticize the amount of dues they pay and they fail to realize that medical dues are a mere trifle as compared to the fees and dues that are paid by members of labor unions. Medical society dues as compared with labor union dues are merely a pittance"—C P D, in the St. Louis County Medical Society *Bulletin*

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"Almost in proportion as the League of Nations has become derelict in prestige and power regarded from the political viewpoint, it has advanced as director of, or a great influence in, international health matters. Whatever its defects may have been, it has justified its existence in this direction abundantly. It is veritably an international clearing house in health affairs, and a list of what it has accomplished already in this sphere of its labors would indeed be long. The health activities of the League are based on a sound foundation, immune from the political passions which have undermined the foundations of universal friendship for which it was founded. Politically the foundations of the League were always infirm. It may be said to have had no foundations but was built on sand, while hygienically it was built on rock. If the health of the people is the supreme law, then the League has fulfilled its purpose

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"Will American Medicine soon be faced with the necessity for civil disobedience in the public interest? It may be the only possible alternative in view of the political trend toward national socialism in this nation. Faced with a choice between regulation by its own code of ethics or obedience to embarrassing, encroaching, onerous, sumptuary, or even hostile legislation conceived for the advancement of social reforms, but in practice too restrictive of medical freedom of thought and action, what will the profession do? The question must be answered.

"In their haste to bring about social reforms, many of which are desirable and some few of which may well be attainable in time, legislators are constantly importuned to drive the wedge of positive law further into the domain of the unenforceable. Particularly is this true of legislative onslaughts on medicine.

"The code of ethics of the medical profession is the only law which can be recognized by physicians within the domain of the unenforceable. The unenforceable is 'that which you should do although you are not obliged to do it.' The unenforceable is the motivation of the art of healing. It should not be commanded, it cannot be driven, it must not be compelled. Yet the public welfare law seeks to regulate it. Compulsory health insurance seeks to shackle it—has enchained it in many European countries. It is not of those things 'which are of a kind fit to be regulated by government.'

"Will the legislators of this nation force the medical profession into civil disobedience

voice which beseeches "common sense" in the *practice* of medicine. Such is the article by Summers<sup>1</sup> concerning the practice of pediatrics.

He terms the pediatrician "a general practitioner for children." The desperately sick child (and every child is desperately sick at the beginning of any illness) will in most instances recover by the institution of sound symptomatic treatment and "watchful waiting." Thus, he claims, holds true for almost 99 per cent of sick children. For the others, in particular those afflicted with diphtheria and severe scarlet fever, specific therapy must be instituted promptly, and these ailments are readily recognized by any physician.

The management of fever in a child, the dietary needs during illness, the importance of a planned regime in the period of recuperation, and the strict attention to cleanliness and nursing care will, more often than not, bring about the cure of a sick baby. Spectacular therapy, while useful and efficacious in the selected case, cannot and should not be applied to the ordinary everyday illnesses which occur in the lives of all children.

Here again is strong support for the continuance of individualization in the practice of medicine as a necessity for the furtherance of the public health.

### Sulfamethylthiazol

So much work has been done in the development of sulfanilamide and its allied compounds and in the clinical application of these drugs to combat the diseases caused by the pneumococcus and streptococcus, that one no longer registers surprise when still another offspring of the parent compound is reported as effective against the staphylococcus. The addition of the thiazol radical to sulfanilamide has produced sulfathiazol, and its methylated derivative is sulfamethylthiazol which, from experiments *in vitro* and *in vivo* is a more efficient agent against *Staphylococcus aureus* than either sulfapyridine or sulfanilamide.

Staphylococcic bacteremia has always been accompanied by a high mortality rate until the advent of these drugs. With this new compound Herrell and Brown<sup>2</sup> obtained recoveries in 4 cases of infections due to this organism. 2 cases of severe cellulitis, 1 of lobar pneumonia, and 1 of a fulminating staphylococcic septicemia. The new drug appears clinically to be less toxic than sulfapyridine which also is valuable in the treatment of staphylococcic infection. In their preliminary report on the use of sulfamethylthiazol, Herrell and Brown advocate as the dosage 2 grams for two doses at four-hour intervals, and then 1 gram every four hours. With the wider use of

<sup>1</sup> Summers C. B. J. Mo. Med. A. 11: 444 (1930)

<sup>2</sup> Herrell W. E. and Brown A. E. Proc. Mayo Clinic 14: 753 (1930)

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ence? Ignorance of medical professional standards and ethics is no excuse. Disregard of the rights of a professional minority, where these rights are exercised in the public interest within the domain of the unenforceable, may well provoke it. Think fast, Solons!"—The *Westchester Medical Bulletin* for February discusses "The Domain of the Unenforceable" in a most interesting fashion

"Much is being said of people coming from other shores here to sow the seeds of foreign ways of life, but much less is said of those who come here because they find in the fundamental principles of these United States the highest expression of their own hopes and aspirations. They

do not come to reform or to force upon it something which is foreign to it, but because they hope that, by making the fullest use of the opportunity which this country so lavishly offers to anyone prepared to grasp them, they may, in return, add their mite toward the structure of a culture and civilization, the like of which this earth has never seen. In fact, so fully do they appreciate the American institutions, that they often support them more wholeheartedly than do those whose fathers were born here, and who perhaps for that very reason do not appreciate their wonderful heritage as they should"—From the inaugural address of Dr. Julius Jensen, president of the St. Louis County Medical Society

## Annual Meeting

May 6, 7, 8, and 9, 1940

New York City

**T**HE banquet which coincides with the Annual Meeting of the Medical Society of the State of New York will be held at the Waldorf-Astoria on Tuesday evening, May 7, 1940. Among the speakers will be Chancellor Woodward Chase of New York University, and Dr. Alice Stone Woolley, president of the Women's Medical Society of New York State.

Music for the banquet and dance afterward will be furnished by the Doctors' Orchestral Society of New York under the supervision of its president and founder, Dr. Leopold Glushak.

Banquet tickets may be secured in advance from the New York Office, which, after April 15, 1940, will be at 292 Madison Avenue, New York City. The price of the tickets is \$5.00. Tables seating ten can be reserved.

The four days of the meeting begin with the House of Delegates on Monday, with the Scientific Sessions starting on Tuesday and carrying through Thursday. All three mornings and Wednesday afternoon will be devoted to the specialties, Tuesday and Thursday afternoons to the two General Sessions.

All members should register at the desk in the Silver Corridor. In past years a number have neglected to do this, and it is essential that the record be full and accurate. There is no charge for registration.

PETER IRVING, M.D.  
General Manager

*Medical Society of the State of New York*

# THE TREATMENT OF X-RAY BURNS AND OTHER SUPERFICIAL DISFIGUREMENTS

A. BENSON CANNON, M D, New York City

(Associate Professor of Dermatology, College of Physicians and Surgeons, Columbia University)

**I**N THIS paper I do not propose to make an exhaustive or scholarly survey of all the possible methods of treating acute and chronic x-ray burns and the other cutaneous disfigurements—keloids, acne rosacea, and scarring from acne—which I shall discuss here, nor do I make any claim to originality in the methods employed. I shall try, rather, to present a practical working plan for such treatments, based on methods which, from my experience, I have found to be most efficacious.

## Chronic X-Ray Burns

Because of the increasing frequency with which we are consulted for the treatment of x-ray burns, particularly those of a chronic nature, and also because of the great danger that trophic ulcers or epitheliomas will develop on the site of the burn, consideration of the most practical and effective methods of removing such burns becomes a matter of first importance. Personally, I have obtained the most satisfactory therapeutic results in chronic x-ray burns by the use of desiccation with the electric needle, cauterization with trichloroacetic acid, scarification, or, sometimes, by a combination of all three methods.

I consider desiccation to be the most effective of all these methods, particularly when the burn covers a large area. My procedure is to wash the surface to be treated, first with warm water and soap, and then with a 70 per cent solution of alcohol. I then freeze the affected part with ethyl chloride and wipe it off quickly with cotton, in order to prevent the ethyl chloride from igniting. Then, using the lowest current possible with the desic-

cating needle, I lightly desiccate all of the dilated blood vessels and the elevated scars, and bevel off the edges of the depressed scars. When the entire area has been desiccated I wipe it off once more with cotton pledgets saturated with alcohol, and apply a calamine liniment containing 2 per cent of boric acid over the entire treated surface. I use a skin-colored liniment, which so effectually conceals the disfigurement that after it is applied the patient is able to leave the office looking little the worse for the treatment.

Desiccation requires a great deal of time, for it must be done slowly and painstakingly. Frequently, when the entire face, neck, and ears, or one extremity is involved, I have taken as much as three or four hours to complete the treatment. In case the disfigurement is so extensive that the desiccation is likely to be tiring or painful, or if the patient is very nervous, I find it well to give him 1½ grains of pentobarbital sodium and wait until he has become relaxed and drowsy from the effects of the drug before beginning the desiccation. Sometimes I give him, instead, an injection of codeine or morphine, the choice of preliminary anesthetic depending, of course, on the extent of the area to be treated, the degree of the disfigurement, and the nervousness of the individual patient.

I always instruct the patient to apply warm boric acid compresses to the treated parts for fifteen or twenty minutes three times a day, and to use calamine oil immediately afterward. At night he should apply a thick coating of cream made of equal parts of lanolin and eucerin. He should be made to realize the importance

of keeping the parts well lubricated with oil or cream, not only immediately after the treatment, but for all the rest of his life, for such treatment helps to keep the tissues soft and thus acts as a preventive of keratoses and epitheliomas.

If the skin is very severely scarred from x-ray burns I often, at one sitting, paint the larger scars with trichloroacetic acid and the small, sieve-like, pitted ones with either trichloroacetic acid or a 10 per cent solution of phenol. If the area to be treated is very extensive, a more drastic method of cauterization is called for. In such cases I dip a wooden applicator into a 50 per cent solution of phenol, drag it across the scarred surface, and, as the skin whitens, neutralize the acid with a 70 per cent solution of alcohol. Usually by the end of a week the skin has recovered sufficiently from the effects of the treatment so that it can be cauterized a second time. As a rule, though, I think it is better to wait two weeks or even longer before repeating the cauterization.

If there are any epitheliomas present they should be removed at the same treatment session by means of a bipolar current run through a platinum loop, after which the base and edges of the wound should be curetted and desiccated, and then boric acid ointment dressings should be applied to the entire wounded area. Some dermatologists are of the opinion that it is impossible to prevent the development of epitheliomas in old x-ray burns and that all the patient can do is to have them removed as they appear. It has been my experience that desiccation, and sometimes also cauterization, of chronic x-ray burns not only brings about a tremendous improvement in the patient's appearance but also delays, and in some instances even helps to prevent the occurrence of epitheliomas.

I recall 1 young woman patient from whose face I had removed, annually for five years, anywhere from 1 to 4 epitheliomas which developed on the scarred surface of an old x-ray burn. The disfigurement was so great that the patient was very much handicapped in her efforts to find employment. I finally persuaded

her to allow me to try desiccation treatments. Her face improved to such an extent that she was soon able to secure a position as a model. Furthermore, in the ten years which have elapsed since she received the last desiccation treatment, she has had only 1 epithelioma. Five years ago I treated another patient for extensive x-ray burns and epitheliomas of the face. She had had several epitheliomas removed previously. I removed 6 epitheliomas from her face and desiccated the entire burned area at the first treatment, and the patient has been entirely free from epitheliomas since that time.

I could quote numerous other instances of patients who had suffered repeated occurrences of epitheliomas annually, or even oftener, whom I have treated by desiccation, with the result that they have not been troubled with epitheliomas for periods varying from two to four years after the last treatment. Hence, not only for its cosmetic effect, but also because it tends to prevent the development of epitheliomas, desiccation therapy of chronic x-ray burns is a decidedly advantageous method. True, it requires the expenditure of a great deal of time and the exercise of infinite patience on the part of the dermatologist, it is hard on his eyes, and it is physically exhausting. But the rewards, in terms of the patient's improved appearance, peace of mind, and comparative freedom from threats of future malignant disease are so great as to outweigh completely any personal inconvenience to the physician.

For localized x-ray burns, particularly those in accessible areas, I advocate surgical removal of the part, after which the flaps should be sutured together in such a manner as to secure as inconspicuous a scar as possible. Sometimes, too, skin grafts may be used. The advantages of surgical excision are threefold: (1) it gives a more pleasing cosmetic result than other methods, (2) it brings about a permanent cure, and (3) it practically insures the patient against the possibility of the tissues breaking down in the future.



FIG 1 X-ray burn involving side of face, and showing pigmentation scarring, and contraction. The distinct white, atrophic areas visible resulted from previous application of carbon dioxide snow. Treated by desiccation.

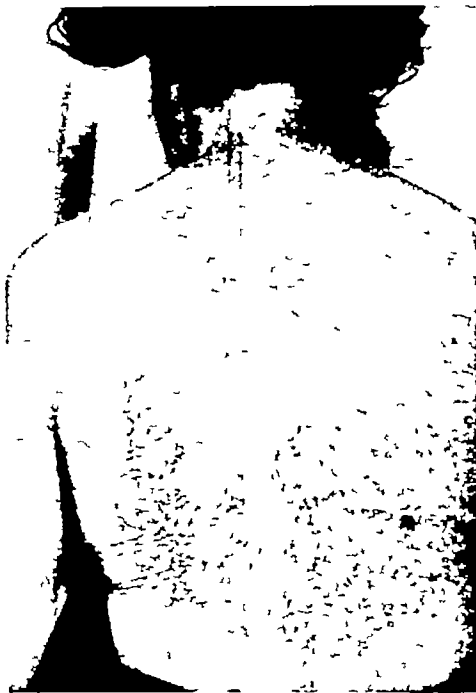


FIG 2 Extensive x-ray burn, showing atrophy, scarring telangiectasis, and epithelioma. Treated by desiccation.

### Acute X-Ray Burns

While we are not consulted so frequently for the treatment of acute x-ray burns, we do see them occasionally, and also trophic ulcers which have developed at sites where old x-ray scars have broken down. Complete amputation of the sloughing, burned area is the best method of treatment for such burns. Before removing the ulcer, however, one must first make sure that it has become localized, that it is free from infection, and that the surrounding swelling and vesiculation have entirely disappeared. After the scar has been amputated the flaps should be sutured together and skin grafted on to the wound.

If the acute burns are so extensive or their location is such that they do not lend themselves well to surgical removal, excellent results may be obtained by thoroughly desiccating and curetting the ulcerated area and then applying Aloe vera leaf. Although wounds of this type heal slowly, from six weeks to four months usually being required for complete

healing, they do invariably heal satisfactorily and completely, and leave few, if any, traces of the former burn. I often use Aloe vera leaf for such burns without doing any preliminary desiccating or curetting. The wound, however, heals almost twice as slowly as when it is desiccated and curetted before the leaf is applied. This method has the further disadvantage, also, that the residual scar is not always free from telangiectases.

Although Aloe vera leaf is by far the best treatment that I know of, except surgical therapy, for the treatment of painful, sloughing x-ray burns, it unfortunately sometimes produces a dermatitis, with redness, swelling, and, occasionally, vesiculation of the surrounding parts, accompanied by pain so severe as to require the administration of local or systemic opiates for its relief. Aspirin ointment (1 Gm. of powdered aspirin to 1 oz. of vaseline or cold cream) applied thickly over the painful part will also help to relieve the pain. If used for sev-



FIG 3 Generalized keloids following pustular syphilis in mulatto. Treated by painting lesions with trichloroacetic acid, followed by roentgen irradiation

eral days in succession this ointment will cause the skin to become puckered, grooved, and white in appearance, and in many ways to resemble skin which has been treated with strong salicylic acid. This is not a keratolytic effect, however. Orthoform ointment (10 gr per ounce) or orthoform powder sprinkled lightly over the wound will give immediate relief from pain, but unfortunately it cannot be used for more than a few days at a time, for it often produces a severe dermatitis with all its accompanying pain and discomfort. Neither hot nor cold wet dressings give much relief, and indeed, in many instances, they actually increase the pain.

Quite frequently we are consulted by patients who complain only of a dryness, roughening, and pigmentation of the skin. They give a history of having had

x-ray treatments for an old acne, usually several years previously, but they usually have not the slightest suspicion that the earlier x-ray treatments may have had anything to do with the present condition of their skin. The moment such a patient walks into the consultation room the dermatologist will be led to suspect that here is a victim of excessive radiation therapy, for the skin of his face, and particularly his nose, has a typical, slightly pinched, thinned appearance, and often a slight wrinkling on the chin and at the sides of the mouth is apparent when he smiles. Close inspection of the skin under a bright light, or, in very mild cases, under the lens, will reveal a definite thinning and dryness of the skin in some places, and sometimes a scaling and a moderate degree of wrinkling. In more pronounced cases pea-sized areas of macular pigment are visible. Quite frequently there will be evidences of telangiectasis or definite scarring.

For this type of case we usually depend on scarification, or, in the milder ones, on massage with keratolytic ointments containing salicylic acid either alone or in combination with betanaphthol. We remove the pigmented spots carefully by desiccation, and when the treatment is completed, apply calamine oil over the affected area. The patient is instructed to use this preparation frequently during the day, and a cream at night, in order to keep the tissues soft.

### Keloids

I feel that success in the treatment of keloids depends in large measure on the stage in their development at which therapy is begun. If the keloid is treated in the early period of its growth, a cure is practically assured, but if it is allowed to develop, the keloidal mass frequently becomes so hard and resistant that no amount of x-ray therapy, even to the degree of a burn, will be of any avail. I have often heard the opinion expressed that keloids will disappear spontaneously. Instances of such disappearance are, I believe, comparatively rare. It has more often been my experience that

the trauma resulting from the patient's scratching of the burning, itching keloids served only to irritate them, and that, far from showing any tendency to disappear, the keloid more often than not was aggravated by lack of treatment. In any case, I would certainly never advocate postponing treatment just in order to see whether or not the keloid would eventually disappear of itself.

For early keloids I usually find that x-ray therapy alone is the best treatment. I ordinarily give 150 r unfiltered or 275 r filtered through 3 mm of aluminum ( $1\frac{1}{2}$  erythema dose) at intervals of two weeks. I recall the case of a patient who, having fallen asleep while smoking, had sustained severe burns when the celluloid shade on her bedside lamp caught fire from her cigarette. The burned portion of the skin showed large, hypertrophic, shiny, red scars, frank keloids, and some areas of beginning contraction. We gave her three treatments, each consisting of 150 r unfiltered ( $1\frac{1}{2}$  erythema dose) at two-week intervals. The results far exceeded my most optimistic expectations. While the skin still had a smooth, white, atrophic appearance, the scars were so much improved that when the patient used liquid powder and makeup they were scarcely visible, even at close range.

Another patient was referred to me several years ago by a New York hospital for the treatment of a keloid involving the skin over the entire abdomen. This patient had been severely burned when a nurse, in preparing her for an abdominal operation while she was under a general preliminary anesthetic, used nitric instead of chromic acid to paint the abdomen. When the wound healed some six weeks later a violently red, shiny keloid had formed, which was elevated about one-fourth inch above the surface of the skin. The patient complained that it itched and burned severely. We gave her 225 r unfiltered ( $3\frac{1}{4}$  erythema dose) and prescribed a calamine lotion containing phenol. The patient did not return for several months. When I did see her, however, the skin over the entire abdomen was smooth and white. A slight

amount of atrophy and some enlargement of the follicles were the only evidences of the previously existing keloids.

Hard or organized keloids of long standing will require such large doses of x-ray to bring about their complete involution—if it can be done at all—that I think it is better to give only one or two radiation treatments and then desiccate the keloid or cauterize it with trichloroacetic acid or acid nitrate of mercury. Care should be taken when desiccating it to stay well within the margin of the keloid. The patient is instructed to apply dressings of boric acid ointment daily. This procedure has the advantage of requiring comparatively little x-ray therapy. We try never to use more than 750–1,500 r unfiltered or 1,375–2,750 r filtered through 3 mm of aluminum ( $2\frac{1}{2}$ –5 erythema doses) in any case.

If the keloidal area is not too extensive and is located in a place suitable for excision, I advocate surgical removal, preceded and usually followed by radiation therapy. By this method one can obtain excellent cosmetic results in a comparatively short time.

I have found the removal of keloids from within the scars of old x-ray burns to be an exceedingly difficult problem. As a rule I rely on the desiccating needle in treating such cases, taking care, as usual, to stay well within the margin of the keloid, or I have frozen the keloid with ethyl chloride and then, using a scalpel, have excised it level with the skin and desiccated the base. If one is careful always to burn down any superfluous granulation with acid or to curet it as quickly as it forms, one can usually cure all the keloids existing in the scars and prevent the formation of others.

### Acne Rosacea

One of the most brilliant cures that I know of in acne rosacea is obtained by scarification. I speak here, of course, of those cases of acne rosacea in which one is unable to find any focus of infection which might account for the condition, or in which the usual dietary measures, hydrochloric acid taken internally, the use of



FIG 4 Acne rosacea Cured by scarification

astringents and other types of local applications, and radiation therapy, have all proved equally unavailing

One complete scarification of all the parts affected will usually produce amazingly beneficial results within one week or ten days. While the operation is a most bloody one, patients are often surprised at the very slight amount of pain which it causes them. Usually they complain more of the nervousness which thoughts of the operation arouse in them than of any actual pain which it may cause. For this operation I have two abscess knives, which I never use for any other purpose, the blades of which are always kept as sharp as the edge of a razor. The patient is put in a reclining position on the operating table, his face carefully cleansed with cotton pledgets saturated in alcohol and then dried thoroughly. Next, starting from the bottom of the affected area and working up, I make multiple, parallel, superficial incisions about one thirty-second of an inch apart, horizontally across the entire reddened surface, taking care never to go below the epidermis. I place pledgets of

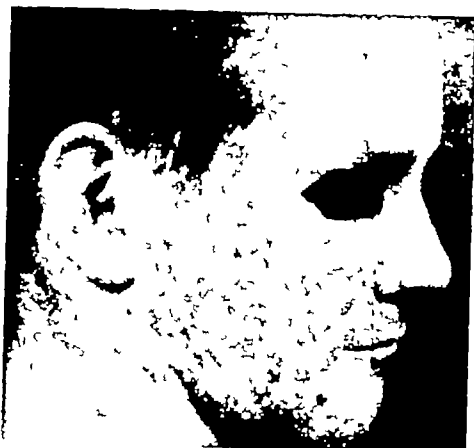


FIG 5 Acne vulgaris, showing scarring, which was healed by scarification, and also by ringing margins of deeper pits with trichloroacetic acid

cotton over the bleeding areas as each incision is made, and watch carefully to see that no blood gets on the untreated surfaces or obscures the skin. When the surface to be treated has been entirely covered with the horizontal incisions, I go over it again and make vertical incisions in the same manner, so that the reddened area has a checkered appearance. Within about ten minutes after the last incision is made the bleeding will have practically stopped and one can remove the cotton pledgets. The face should then be covered with a calamine lotion containing boric acid and a great deal of oil. We find it a good idea to give the patient pledgets of cotton or gauze to take with him when he leaves the office, so that he can wipe away any serum which may ooze. Anywhere from one to four or five scarifications will usually suffice to clear up even the most aggravated cases of acne rosacea without leaving any scars or other evidences of the treatment undergone.

#### Scarring from Acne

Acne scars constitute one of the most common defects of the skin which dermatologists are called upon to treat. Not infrequently one finds that patients requiring such treatment still have a few acne lesions scattered here and there be-

tween the scars, which should be removed before the scars are treated. The first step in this procedure is to express the pus from the pustules. To do this I sharpen a needle-point stick, dip it into phenol, and then, while holding the pustule between the thumb and index finger, bore the point of the stick into the pustule. All comedones are carefully removed. The pitted scars are then scarified by the same method as that described for the treatment of acne rosacea. I always try to avoid scarifying the bases of the scars, and, if the scars are close together, I make the incisions only on their rims and on the intervening tissue. After the scarification is completed I cover the treated areas with calamine oil or liniment, and the patient is allowed to leave the office. He is instructed to apply warm compresses for twelve or fifteen minutes, two or three times a day, and to apply calamine lotion in between the times when he uses the warm compresses. He should also spread cream thickly over the area at night. The treatment may be repeated, if necessary, within a week or ten days.

In treating large, deep scars resulting from acne, I "ring" the margins of the scars with trichloroacetic acid and try to bevel off the edges so that they will blend in with the surrounding skin. When the beveling process has been accomplished I scarify the area in order to lessen the disfigurement still further.

Sometimes one finds multiple, closely studded and pitted scars which the patient will usually refer to as "enlarged pores" or "pits." These we treat by dragging a wooden applicator dipped in phenol solution over the surface of the skin and, as the skin becomes white, neutralizing the phenol with a 70 per cent solution of alcohol. Occasionally I treat these scars by inducing a severe keratolysis by means of blistering doses of Alpine light, or by applying either a 10 or 15 per cent solution of salicylic acid or a preparation containing both strong salicylic acid and betanaphthol. None of these last-mentioned methods will remove the scars entirely, but they will

help to flatten an elevated scar, and sometimes they will produce such extensive peeling that the scarring will be appreciably lessened and the appearance of the skin will be greatly improved.

### Summary

Excision of x-ray burns is the treatment which will give the best results. Where extensive areas of the skin have been affected by excessive radiation one can greatly improve the appearance of the skin and minimize the probability of cancer in the affected tissues by removing the dilated blood vessels, elevated scars, and keratoses with the electric needle, sometimes in conjunction with the application of trichloroacetic acid to the scars.

Early therapy of keloids is of great importance for successful cure. X-ray therapy offers the most satisfactory results.

Scarification for acne rosacea and for scarring following acne often gives the most beneficial results.

### Discussion

Dr Earl L. Eaton, *Buffalo, New York*—I am very grateful to have the opportunity of being present and of listening to this very interesting and instructive paper on the "Treatment of X-ray Burns and Other Superficial Disfigurements." Dr Cannon has covered the subject very thoroughly so that it leaves very little for me to add to what has already been said.

The treatment of roentgen-ray burns is, of course, very important to all of us. From my own experience, I think we are fortunate in seeing less of these burns in the past few years than we did previous to this time and I feel that this is due to the fact that we have better methods of measuring accurately the total dosage. We know that the total dosage should not exceed about three skin units in any one area. Furthermore we know the disastrous and damaging effects of roentgen ray and radium ray on normal tissue. We know that in many cases, particularly of skin disease, if definite improvement or cure has not taken place after six to eight treatments it is not wise to continue indefinitely to treat with roentgen ray, first because the lesion or lesions treated do not react to the therapy, and second much damage may be done through continued use of the agent.





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It is possible that we may see an increase in the incidence of roentgen-ray burns because of the high-voltage machines now being used in the treatment of malignancy

Carl Zeiler and Carl Hoede of the University of Würzburg observed that the skin tolerance dose has been largely overestimated. They are of the opinion that our present skin unit dose is one-quarter or one-third too high and that late damages may appear if these doses are given two or three times in one year. They also state that roentgen and radium rays act on the chromatin, disturbing the normal mitosis, this effect being permanent and leading to diminished metabolic function of the cells over the irradiated areas. In lesser degrees of cell damage, degenerative cell types may develop, occasionally producing carcinoma. They state that following roentgen-ray irradiation, we find changes in the nuclei and in the mitotic figures of the cells of the skin, subcutaneous tissue, and small blood vessels. As time goes on, these changes may disappear superficially but may be demonstrated as late as two years following one x-ray exposure, then will be demonstrated by decrease in defensive powers of irradiated areas. They also tell us that a skin that has been irradiated should have protection against constant rubbing of clothing, overexposure to ultraviolet light, or the application of different irritating medicines such as tar, iodine solutions, etc. The general condition of the patient should be watched especially in cases of cardiac insufficiency, diabetes, malaria, hypertension, chronic kidney disease, tuberculosis, etc.

In the treatment of radiodermatitis we cannot prevent a reaction, as far as is known, once the exposure has been given. In the acute radiodermatitis, mild ointments may be applied, olive oil or mineral oil, ice-cold compresses to relieve pain, wet dressings of olive oil or witch hazel can be used. In second-degree radiodermatitis, the same mild ointments and mild applications should be used, such as a 1-20 liquor aluminum acetate solution, soothing lotions such as calamine lotion or calamine liniment, as suggested by Pusey. For third-degree reactions, in the beginning, soothing local applications can be used. It may be necessary because of pain to use anesthesia, or internal administration of codeine or morphine. Surgical procedure may be necessary for removal of necrotic tissue.

In chronic radiodermatitis, treatment depends on what is found to be present. In my own experience, where telangiectases and keratoses have formed, I have used electrodesiccation that is the monopolar desiccating current. For those lesions that are wrinkled, atrophic, and dry, I

use bland emollient ointments and protect them from irritation as much as possible.

European specialists report favorable results in the treatment of ulcers (with no evidence of malignant degeneration) with ointments impregnated with radium salts or radium emanation. My experience in the use of these agents has been very limited but, from a survey of the literature, it appears that the benefits derived from the use of these ointments have been greatly overestimated. Dr. Miescher of the Zurich Clinic, who has had a large amount of experience with this type of preparation, recently stated that he had abandoned these remedies and has employed other palliative or surgical measures.

My own personal experience in ulcers, both malignant and nonmalignant, has been electrodesiccation or surgical procedure—removal of ulcer and closing of the wound with sutures, grafts, or flaps, depending on the feasibility in the particular case. I have found that this gives the most satisfactory end result and is much less disturbing and painful to the patient. The plant, *Aloe vera*, has been used in the treatment of radiation ulcers but I have had very little experience with it, using it in only 1 case and failing to secure any marked results. However, the literature discloses cases that have shown marked improvement by the use of this leaf.

**Keloids**—In the young, growing, erythematous keloid, the use of the x-ray is generally satisfactory in suberythematous doses and, in most mild cases, filtered. As the lesion becomes older, less vascular, and harder to the touch or on palpation, it is more radioresistant and the result of treatment not nearly so good. Unless the lesion is very small or on an area of the body where an extremely good cosmetic result is not so important, I sometimes use suberythematous doses of x-ray for a few times and improvement can be noted, however, for complete removal in these old cases I feel that surgery should be resorted to and the wound closed with as few sutures or clips as possible, then watched very carefully for any formation of new keloid tissue. Of course, at the first sign of return, treatment should be started. In my own practice, I have gone a step further in these cases and given a couple, sometimes three suberythematous doses, starting my first treatment as soon as the wound is healed, thus preventing any return of the former keloid.

**Acne**—As for treatment of scars from acne, we might first say that certain types of acne may be excluded from x-ray therapy—those mild cases where local and constitutional remedies and hygienic measures should be tried first, the acute, inflamed eruptions should be allowed to

subside before therapy is started, x-ray should not be employed in infantile acne, in certain toxic cases roentgen therapy should be deferred until the toxin is eliminated

We very often have scarring following the treatment of acne and we all are familiar with the pitlike scars that are present in these cases as a result of the disease. There is a divergence of opinion as to whether or not one should remove the comedones and evacuate the pustules before treating the patient with x-ray. It has been my method to do this and I feel that my results have been better as far as the disease itself and the improved cosmetic results are concerned

Where scarring is present after a course of x-ray treatments have been given, I have found that exposures to ultraviolet light have caused marked improvement and even disappearance of the scars. Andrews states that in most cases ultraviolet light energy is specific for these sequelae of acne. The best results are obtained by giving erythematous or even blistering exposures of ultraviolet light energy in these cases

Dr Howard Fox, *New York City*—In regard to the ill effects of roentgen-ray treatment, I am glad to say that few of them at the present time are caused by dermatologists. We have learned how to standardize the dosage and to keep it within safe limits. I agree with the speaker that small areas of damage due to x-rays are best treated by excision. I also agree that treatment by solid carbon dioxide, even with the mildest application is unsatisfactory as it produces disfiguring white patches

We all agree, I think, that keloids are best treated with x-rays or radium with or without surgical excision. Furthermore, such treatments are only satisfactory when the lesions are comparatively recent. When they have existed a year or two, the outlook for a favorable result is poor. Keloids can be destroyed by electro-desiccation and then irradiated. The resulting scar, from a cosmetic standpoint, is less favorable than when the lesion is excised. It seems impossible, however, to excise a keloid and leave a narrow linear scar. Invariably, in my experi-

ence, such scars have widened to a broad band even though irradiation has prevented their further elevation

I agree entirely with Dr Cannon about the value of scarification in acne rosacea but I have usually found it difficult to persuade my patients to submit to this method of treatment

Dr Timothy J Riordan, *New York City*—A word or two about the histopathology of keloids deserves mention. In lesions of short duration young fibroblasts are found which are radio-sensitive. In lesions of long duration old connective tissue cells which are radioresistant are found along with hyaline degeneration of the collagen. The latter is necrotic tissue. I believe these points serve to explain the improvement achieved with roentgen therapy in early lesions and failure in older lesions

Dr A. Benson Cannon, *New York City*—With regard to the use of electrolysis in x-ray burns, I feel that it is too tedious and time-consuming, and that it too often causes pitting scars. One can accomplish the same results almost ten times more quickly by desiccation than by electrolysis. In addition, desiccation presents the advantage that the skin does not have to be touched with the desiccating needle, whereas in electrolysis the skin is punctured and a scar is likely to result

I did not mean to convey the impression that it was an easy matter to remove keloids by surgery combined with pre- or postoperative irradiation. On the contrary, to secure satisfactory results by this method it is often necessary to persist in the treatments for quite a long period, and occasionally the mode of treatment has to be changed before the condition shows any signs of improvement.

I also use both Alpine and Kromayer light to treat scarring from acne, giving doses massive enough to cause blistering and subsequent exfoliation. I think this is an excellent method, since it peels off the epidermis and helps to clear up any acne which may still remain. Its one disadvantage is that it burns not only the margins but the bases of the scars as well

#### A GUESS AT THE NUMBER ONE PRESCRIPTION

What drug or what substance is it that a doctor prescribes oftenest? An interesting subject for speculation. If we should finally determine that this reagent was possibly digitalis or aspirin, it would be reasonable to suppose that the doctors who so frequently prescribe these remedial agents would be greatly interested in the purity of the composition, the manner of the assay, and the methods by which they were made available

to the profession and to the public. Without attempting to cite statistics in the matter, the editor of the *Journal of the Indiana State Medical Association* believes that it is not digitalis or any other drug in the usual sense of the word that is prescribed most often, but that probably *milk* is mentioned oftener by the doctor than any other remedial agent with possibly water and certain foods in second and third places

# CHRONIC PYELONEPHRITIS—A CAUSE OF HYPERTENSION AND RENAL INSUFFICIENCY

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IN RECENT years it has become increasingly evident that certain infections of the urinary tract, which were formerly thought of as relatively trivial attacks of cystitis or "pyelitis" are, on the contrary, of the greatest seriousness and importance. Wilson and Schloss<sup>1</sup> some years ago pointed out that the so-called "acute pyelitis" of infants was, in fact, a pyelonephritis. More recently Longcope<sup>2</sup> has described a chronic form of bilateral pyelonephritis, occurring without any obstructive lesions in the urinary tract, progressing insidiously over a long time to a state of renal insufficiency, and frequently characterized by hypertension. The individual episodes of urinary infection may, of themselves, appear trivial, so that an appreciation of their significance has come in retrospect after the damage has been done. At the same time Peters<sup>3</sup> has called attention to the probability that antecedent urinary infections play an important etiologic role in the late "toxemias" of pregnancy, which are characterized by hypertension.

The work of Goldblatt,<sup>4</sup> who produced hypertension experimentally by partial renal ischemia, has led to the discovery that a pressor substance is produced within the kidney, which acts through a humoral mechanism, and which may be formed if unilateral renal ischemia is induced. This same pressor substance is probably responsible for the hypertension of pyelonephritis, since Butler<sup>5</sup> has reported the relief of hypertension by nephrectomy in 2 cases of unilateral pyelonephritis in children. The pressor substance is also produced apparently by urinary obstruction, since hypertension

is commonly associated with hydronephrosis, and extracts prepared from hydronephrotic kidneys by Williams and Harrison<sup>6</sup> were found to yield greater pressor effects than those obtained from normal kidneys.

## Case Reports

*Case 1*—D Y, a young married woman aged 33, was admitted to the Strong Memorial Hospital in August, 1937, with marked hypertension, hypertensive retinopathy, cardiac hypertrophy, albuminuria, bacilluria, and many leukocytes in the urinary sediment. Renal function was seriously impaired, the urea clearance was 25 per cent of normal, and at times the nonprotein nitrogen of the blood was elevated, 44–67 mg / 100 cc. She was moderately anemic. Blood pressure 230/140.

The history was that on her honeymoon eleven years previously she had suffered from a "deflorescence pyelitis," which had lasted for several weeks, ultimately responding to medical treatment. The first two pregnancies had terminated in miscarriages. In each of the next three pregnancies which went to term, there were severe late "toxic" manifestations. The blood pressure was elevated and there was edema but no eclampsia. The last child was born five years before admission. For two and one-half years she had been under the care of a physician for hypertension.

In the hospital the patient was treated by transfusion, then with mandelic acid, and later with sulfanilamide, in the hope of clearing the urinary infection with *B coli*. These measures were effective at first. Treatment was continued in the urologic clinic by Dr W W Scott. While the patient's condition remained fairly satisfactory, bacilluria and pyuria kept recurring.

Fig 1 shows the retrograde pyelogram made in August 1937. The ureters were dilated though free at their orifices. The pelvis and calyces were distorted, and the renal shadows

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FIG 1 Unilateral pyelogram in Case 1, showing hydroureter and the extreme distortion of the calyces and pelvis

were very small. In view of the reduced renal function pyelograms were made on one side at a time.

An Addis urinary sediment count made August 8, 1937, was as follows: twelve-hour night specimen 800 cc., sp. gr. 1.011, reaction slightly alkaline, rbc 10,200,000, leukocytes 176,400,000, total protein 150 mg. per cent.

In January, 1938, the patient suffered from a geniculate ganglion herpes with facial paralysis on the left side.

In May, 1938, she was re-admitted to the hospital for study, on account of severe headaches and mild uremic symptoms (N.P.N. of blood 75 mg./100 cc.).

In July, 1938, cardiac symptoms began with dyspnea on effort, and later severe nocturnal attacks of cardiac asthma. Nausea and vomiting became frequent. The blood pressure was 240/160. The hemoglobin was 9 Gm./100 cc. of blood and rbc. 2,600,000. Blood nonprotein nitrogen had risen to 100 mg./100 cc. Some improvement followed the use of digitalis and treatment of the anemia.

In August 1938, it was discovered that the patient was pregnant through the fact that she had an incomplete abortion, following which a curettage was done, and the patient again showed some temporary improvement. On August 27, 1938, she was again admitted in uremia and



FIG 2 Kidneys and urinary tract of Case 1, to show extreme degree of contraction of kidneys

failed progressively to the time of her death, one month later.

At autopsy the kidneys were found to be markedly contracted and the ureters greatly dilated. No obstruction of the ureters was found. The gross appearance of the kidneys and urinary tract is seen in Fig 2. The microscopic changes are shown in Fig 3. In this section one can see the evidence of chronic interstitial inflammation. Many tubules are dilated in such a way as to suggest the appearance of thyroid, a feature which has been re-



FIG 3 Microscopic appearance of kidney in Case 2, showing interstitial inflammatory reaction, dilated tubules, irregular glomerular changes, and arteriosclerosis

marked upon by other observers. Irregular glomerular lesions were observed. There was considerable arteriosclerosis.

**Case 2**—E W, a young unmarried woman aged 25, was admitted to the Strong Memorial Hospital because of severe headaches, visual disturbances, nausea, and vomiting. The history records attacks of urinary infection from the age of 1 year. Since the age of 12, which she can remember clearly, these attacks have occurred at intervals of about six weeks. They consisted of fever, burning and frequency of urination, pain in the lumbar region, headaches, nausea, and vomiting. The acute phase of the attack was usually of four to five days' duration followed by a period of convalescence lasting five to six days. The precipitating factor was usually some strenuous physical activity.

On admission in March, 1939 she was found to have a marked hypertension, with systolic pressures ranging from 160 to 190 and diastolic from 110 to 130. The retinas show evidence of hypertensive change with papilledema and hemorrhages. The heart showed hypertrophy.

The urine sediment showed the following count of formed elements: leukocytes and epithelial cells 2,767,500, rbc 300,000, casts 136,000, twelve-hour night specimen was 615 cc, sp gr 1.014, and total protein content 300 mg/100 cc. The maximal urea clearance was 22 and 25 per cent of normal on two successive hours, and the creatinine clearance 31 cc/min. The phenolsulfonephthalein test showed an excretion of 22 per cent in two hours. Culture of the urine yielded a growth of nonhemolytic streptococci. Blood nonprotein nitrogen was 53, creatinine 3.2, proteins and chlorides normal.

This patient had first been studied in the hospital in 1932 at the age of 17. At that time the urea clearance test was 60 per cent of normal, and the phthalein excretion 55 per cent in two hours. Blood pressure was then 108/68. The urine at that time yielded *B. coli communis* on culture, showed a trace of albumin, and there were seen 6-8 leukocytes per hpf in an uncentrifuged specimen.

Cystoscopy was performed at that time by Dr. W. W. Scott, who noted inflammation and congestion in the region about the trigone and vesical orifice. No obstruction of the ureters was found. Pyelograms were not entirely satisfactory, but no evidence of hydronephrosis was obtained, and the pelves appeared to be somewhat distorted.

The patient was followed at frequent intervals in the urologic clinic from 1932 to 1939. At various times *B. coli communis* was isolated on culture, but on one occasion the urine yielded *Staphylococcus albus* in abundance, and on another a nonhemolytic streptococcus. Various agents were employed for combating the urinary infection: mandelic acid, hexamethylene amine and ammonium chloride, high acid ash diet, sulfanilamide, and during the period of staphylococcal infection neosarsphenamine was used. In each instance the clearing of the urine was temporary, no means having been found to prevent recurring attacks.

In February, 1938, the first note of elevation of blood pressure was made. At that time it was recorded as 150/96. The heart was only slightly enlarged. The phthalein excretion in two hours was 42 per cent. The urine, at the time, was free from pus or albumin.

In the period from February, 1938, to March, 1939, the hypertensive phenomena increased markedly, renal function diminished, and mild uremic symptoms occurred. In spite of warnings as to danger of pregnancy the patient married.

**Case 3**—A A., a married woman aged 37, was admitted to the Strong Memorial Hospi-

tal November 4, 1936, and died December 21, 1936. On entry she was found to have pronounced hypertension 210/118, severe anemia, cardiac enlargement, gallop rhythm, congestion of the lung bases, and moderate edema. The electrocardiogram showed left axis deviation and changes indicative of myocardial damage. The urine was of low specific gravity, alkaline, showed a trace of albumin, no sugar. The sediment showed large numbers of leukocytes and both bacilli and cocci in pairs and chains. The degree of uremia was shown by the finding of marked elevation of the nonprotein nitrogen 162 mg, urea 126 mg, creatinine 19 mg/100 cc. Phthalein excretion was negligible. The patient complained of colicky pain in the left flank, radiating toward the pubis.

On cystoscopic examination, performed by Dr Jarman, the bladder showed marked evidence of infection, with edema in the trigone and about the ureteral orifices. No obstruction was encountered on the right side. On catheterizing the left kidney no drainage occurred. A pyelogram of the left kidney was obtained which is shown in Fig 4, indicating the presence of a hydronephrosis and hydroureter with obstruction near the ureterovesical junction.

Culture of the bladder urine yielded a growth of a nonhemolytic streptococcus.

Efforts at treatment failed and the patient died on December 21, 1936. Autopsy revealed a chronic pyelonephritis and pyonephrosis.

From the history the urinary infection began twenty years before the terminal illness, having occurred following a railroad accident in which she suffered compound fractures of both legs. Two years later she had a normal pregnancy, with no signs of "toxemia."

The duration of the elevated blood pressure may be inferred from the fact that she was in hospital with severe "asthma" nine years before her death, and the story from then on was one of repeated attacks of asthma and evidence of urinary infection. Five months before her death she had an attack of pneumonia and the uremic symptoms developed with increasing severity following this illness.

**Case 4**—H D., a married woman aged 29 was admitted to the Strong Memorial Hospital in November 1934, acutely ill, with pain in the epigastrium and vomiting. She was thought at first to have an acute cholecystitis, but later the finding of marked costovertebral tenderness, with pus and blood in the urine, elevation of blood pressure 165/110, retinal exudates, and edema of the disks, pointed toward an acute pyelonephritis. Culture of the urine yielded a growth of *bacillus aerogenes*. The nonprotein



FIG 4 Unilateral pyelogram of Case 3, showing hydronephrosis and hydroureter with obstruction near the ureterovesical junction.

nitrogen of the blood was 66 mg per cent. The urea clearance was 10 per cent of normal. There was leukocytosis and moderate anemia. After symptomatic treatment the patient went home without having had urologic study.

She was re-admitted one month later with pronounced hypertension, B P 220/135. The blood nonprotein nitrogen was 87 mg per cent. The patient was transferred to the Monroe County Hospital, where she remained for some months. She was re-admitted to the Strong Memorial Hospital a third time nine months after the second admission, this time in coma. Spinal puncture yielded bloody fluid. The blood pressure was greatly elevated, the non-protein nitrogen was 189 mg per cent. Death occurred shortly. An autopsy revealed acute and chronic pyelonephritis, cerebral hemorrhage, organizing pneumonia, pulmonary edema and congestion, cardiac hypertrophy, acute endocarditis of mitral and aortic valves, chronic cholecystitis, chronic pancreatitis, fat necrosis, healed.

The history is rather vague as to the exact onset of the trouble. The first urinary infection was said to have occurred following an abortion, date not given. In 1930, four years before her death, she was pregnant and was found to have hypertension and kidney trouble. She was under treatment following the birth of her child in the urologic clinic of another hospital.



The 4 cases briefly described above are typical examples of a common type of chronic recurring infection of the urinary tract, which may terminate in renal insufficiency and hypertension. The isolated episodes of urinary infection are apt not to be regarded seriously when the patient is seen in the early stages of the malady, and the tendency has been to consider them as infections of the urinary passages rather than of the kidneys themselves. Now that it is more clearly understood that they represent a slowly developing chronic interstitial nephritis, there can no longer be any excuse for failure to make a vigorous attempt to terminate the infection and to bring the process to a halt if possible.

Case 2 illustrates the fact to which Peters<sup>3</sup> has called attention, that women who have had such urinary infections may suffer from the hypertensive phenomena of late pregnancy, which we speak of as "toxemias." In such cases the infectious process may have been quite latent or inactive until pregnancy occurred. Then one may witness either an exacerbation of pyelitis, or simply albuminuria, edema, and hypertension, and sometimes eclampsia. The exact reason why this occurs cannot be stated with certainty. It is possible that the "physiologic hydronephrosis" which begins early in pregnancy may cause the formation of the renal pressor substance of which mention has been made, and it is not unlikely that this substance is formed in greater amounts in kidneys which have been the seat of a pyelonephritis. If this proves to be true, then one may expect to find hypertension developing in nonpregnant women who have had "pyelitis" if subsequently some form of urinary obstruction occurs. The case abstract which follows bears upon this point.

Case 5—S H., a married woman aged 57, was seen in consultation January 11, 1939. She complained of shortness of breath and retro-manubrial pain on effort. The chief findings on examination were marked hypertension, B P 200/100, retinal arteriosclerosis of the hypertensive type, enlargement of the heart, systolic bruits at the mitral and at the aortic areas, the

latter being rough and faintly heard in the right carotid artery, and electrocardiographic evidence of left axis deviation, depression of the ST segments in leads I and II, and elevation in lead III.

The urine was found to be free from albumin or sugar, it was clear, slightly alkaline, of low specific gravity. The sediment did not reveal any excess of formed elements. The kidneys were not palpable, and there was no costovertebral tenderness. The history recorded the fact that the patient had suffered from a severe "pyelitis" 13 years before, and that she had been treated after cystoscopy by a urologist. Occasionally she had slight recurrence of frequency and burning of urination, but she regarded these as trivial.

On the basis of this history it was decided to have a cystoscopy performed by Dr W W Scott, and this was done. The urethra was found to be the seat of a stricture, the bladder was found to be hypertrophied and trabeculated. Retrograde pyelograms were made. These did not reveal appreciable hydronephrosis. However, the urethra was dilated, and the patient returned to the care of her family physician.

Reports from her physician show that her blood pressure has been much lower, the highest pressure recorded being 160/90 during the three-month period following this dilatation. The cardiac symptoms were greatly relieved by the lowering of the blood pressure.

This case is complicated by one fact. The pyelograms showed a dense shadow of irregular outline just above the left kidney, which was somewhat displaced downward. This was regarded as a tumor of the adrenal. The patient refused to have the mass explored surgically. The fact remains, however, that the fall in blood pressure followed the urethral dilatation.

Following this experience it was decided to carry out urologic studies, whenever possible, of patients with the so-called essential hypertension, that is, hypertension occurring in patients with normal urine and with good renal function.

Case 6—H C., a married woman aged 51, was admitted to the hospital in an attack of hypertensive encephalopathy on March 14, 1939. The patient had been under the care of a physician in Dayton, Ohio, for several years for high blood pressure. While visiting in Rochester she suffered severe headaches and on the day of admission had fallen unconscious while in the bathroom. She was conscious on admission.



FIG 5 Retrograde pyelograms of Case 6, showing bilateral hydronephrosis and ptosis of kidneys

Her blood pressure was 200/120. She was lethargic, speech was thick, tongue protruded slightly to the right, the neck was slightly stiff. Apart from this there were no striking neurologic abnormalities. The retinas did not show marked evidence of hypertensive changes and the disks were normal. The heart was somewhat enlarged. There was no orthopnea, no pulmonary congestion. There was slight pretibial edema.

The urine was slightly turbid, acid, sp gr 1.030, albumin trace, sugar none, and the sediment showed both granular and hyaline casts, 1-2 leukocytes per h p f, and no red cells. The nonprotein nitrogen was 33 mg. The  $\text{CO}_2$  combining power was normal. The urine was sterile on culture.

On March 16 the patient was better. The blood pressure had fallen to 140/95. The phthalein excretion was 35 per cent the first half hour and 15 per cent the second.

The patient had a history of urinary infection fifteen years before. This was characterized by heavy albuminuria, edema, and foul-smelling turbid urine, the attack lasting for five weeks. Since then there have been frequent episodes of burning and frequency of urination. In 1934 her blood pressure was 160/90.

In view of this history a cystoscopic examination was made by Dr W W Scott. This revealed polyps at the vesical neck. The urine



FIG 6 Pyelograms of Case 7, malignant hypertension, showing bilateral hydronephrosis due to urethral stricture and ptosis of kidneys

from both sides was normal and the function good. The retrograde pyelograms showed ptosis of both kidneys and a moderate degree of hydronephrosis (Fig 5).

Following this procedure the patient's condition was improved, at least temporarily, but sufficient time has not elapsed to determine the full extent and duration of improvement. Since ptosis and ureteral kinking may be an important factor a ptosis belt with kidney pads was prescribed.

**Case 7**—R S, a married woman aged 48 was admitted to the Strong Memorial Hospital for the second time on April 10, 1939, complaining of severe headaches, blurring of vision, and substernal pains radiating into the left arm. On examination the blood pressure was found to be 240/148. The retinas showed edema of the disks, cotton wool exudates, and hemorrhages with narrow arteries and engorged veins. The heart was greatly enlarged. There was a gallop rhythm, a soft apical systolic murmur, and accentuated aortic second sound. There were no evidences of congestive failure. The kidneys were not palpable or tender. A urethral caruncle was seen at the meatus.

The urine showed moderate albuminuria, no sugar, acid reaction, and low specific gravity. The sediment showed 4 leukocytes per h p f in an uncentrifuged specimen, no r b c, and rare hyaline casts. Urine culture was sterile. The

phthalein test was 55 per cent in two hours, but only 15 per cent was excreted in the first half hour. The urea clearance test was 88 per cent, and the creatinine clearance 80 cc/min. The nonprotein nitrogen of the blood was 41 mg. The electrocardiogram showed abnormal ventricular complexes, and inversion of T waves in leads I and II. X-rays of the skull showed no abnormalities. A diagnosis of malignant hypertension was made.

The history recorded known elevations of blood pressure for twelve years, with anginal symptoms for six years. On previous admission in 1933 the blood pressure was found to be 140/90, though it had been observed by her family physician to have been much higher at times. The retinas on that admission showed very moderate hypertensive changes of the vessels, normal disks, no exudates or hemorrhages. The urine showed only a few leukocytes, 8-12 per h p f, with no albumin or sugar. Renal function was good then as now. There were no urinary symptoms except nocturia. The patient had never known of any renal disease and had had no toxic pregnancies.

A cystoscopy was performed by Dr W W Scott on April 19, 1939. He noted the urethral caruncle. The urethra was very tight. The bladder did not show much evidence of hypertrophy or trabeculation, but the pyelograms, shown in Fig 6, revealed evidence of dilatation of the pelves and blunting of the calyces of moderate degree, and in addition there was considerable ptosis and kinking of the ureters. The urethral stricture was well dilated. On the third day after this procedure the blood pressure had fallen to 180/130, as compared with 240/148 on admission. The patient felt better and was free from headaches and anginal symptoms. A belt was given for the renal ptosis, and she was discharged to her physician.

It is, of course, too soon to form judgment of the therapeutic value of the urethral dilatation and correction of ptosis. The report of this case is given as another example of the occurrence of urinary obstruction without symptoms and with good renal function in a patient who had presumably suffered from a so-called essential hypertension.

The last 3 cases indicate that one must revise the current conception of "essential" hypertension, which is that it is of nonrenal origin. Recently, attention has been drawn to narrowing of the renal arteries by atheroma as a cause of hypertension, resembling the experimental hy-

pertension of Goldblatt, by Williams and Harrison,<sup>6</sup> Rosenberg, Keith, and Wagener,<sup>7</sup> and Freeman and Hartley.<sup>8</sup> The cases reported here point to urinary obstruction in the urethra or ureter, either by stricture or by kinking from ptosis. In Cases 5 and 6, both patients were known to have had previous urinary infection, but this was not active at the time of investigation. In these cases the hydronephrosis may have produced exaggerated effects, just as the hydronephrosis of pregnancy does. In Case 7 no other factor than urinary obstruction is known to exist, since there is no evidence of infection. One must consider the possibility that the kinking of the ureter in ptosis of the kidney may also affect the circulation through the renal artery.

Such cases as those recorded here show the importance of making a urologic study of cases of "essential hypertension," even though no evidence of urinary infection is present at the time. In the presence of mild obstructive lesions the urine may be quite normal and the function well maintained, though one may expect low specific gravity and possibly a lower-than-normal phthalein output in the first half hour, even though the total excretion is good.

In treatment of these conditions one must attempt to relieve strictures by dilatation, and to try to correct ptosis and kinking of the ureters. In cases of not too long-standing hypertension these measures offer hope of relief, provided arteriosclerosis is not too far advanced. While it is not likely that arteriosclerosis is the initial cause of the hypertension, one may strongly suspect that when long-standing hypertension produces arteriosclerosis, renal ischemia will become more marked, and its occurrence would probably aggravate the existing condition and establish a vicious circle. This offers a plausible hypothesis for the terminal malignancy of many long-standing and previously benign elevations of blood pressure.

In prophylaxis the indications are clear. All instances of infection of the urinary tract are to be regarded as po-

tentially serious, no matter how trivial they may seem at the time. Fortunately, the chemotherapy of these conditions has been vastly improved in recent years, particularly referring to the use of mandelic acid and sulfanilamide, and the appropriate control of urinary reaction. Some of the older agents are still deserving of occasional use such are hexamethylene amine, neutral acroflavine, and neoarsphenamine. One learns that the strains of organisms in the urine differ among themselves in the way in which they respond to these agents, and several may have to be tried before the optimal one is found. In a given case different organisms may be found from time to time.

Apart from chemotherapy attention should be paid to focal infection, to diet, and to obstruction. Focal infections may be the portals of entry of the organisms which appear in the urine, and their eradication from tonsils, sinuses, teeth, and gallbladders should not be overlooked. Diet may have a great effect on urinary infection and calculus formation. Particularly important is its adequacy in vitamin A. It is well to see that the supply of this vitamin is adequate, and that the other essential factors are not lacking. All cases of urinary infection deserve urologic study.

### Summary and Conclusions

1 Cases are described illustrative of the importance and seriousness, in view of the sequelae, of what may appear to be mild or trivial urinary infections. Cumulative insults over a period of years will frequently result in hypertension and ultimately in renal insufficiency.

2 The disastrous effects of pregnancy in such infections and their relation to the toxemias of pregnancy are strikingly illustrated in 1 case.

3 Hypertension may be the result of asymptomatic obstructive lesions of the urinary tract, even when the urine and renal function are normal. Cases are cited to show the importance of making pyelographic studies in patients with so-called "essential" hypertension.

4 Treatment of even the mildest forms of urinary infection demands the most careful general study of the patient. Chemotherapy may be immediately successful in clearing up infection, but this is not enough. Focal infection must be sought for and eradicated when found. Attention must be given to the diet, which must be adequate in vitamin content, particularly with reference to vitamin A, and adapted to maintain the appropriate reaction of the urine. These factors influence both the susceptibility to infection and to stone formation. Finally, obstructive lesions of the urinary tract must be discovered and corrected.

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### Discussion

Dr David M. Kydd, *Cooperstown, New York*—During the last several years there has been a renaissance of interest in hypertension and nephritis. Following the publication of the initial attempts at surgical intervention in the therapeutics of hypertension there has been a tremendous surge of investigative work. An evaluation of this mass of material leads to quite indefinite results because the attempt is being made to correct damage already done.

Dr McCann's contentions may easily be amplified. For example, Shaffer and Remsen report that of 20 cases of "chronic interstitial nephritis" only 5 had nephritis from some other cause than chronic pyelonephritis. Butler recently cited 2 cases of unilateral pyelonephritis with hypertension whose blood pressure became normal after nephrectomy. Peters states that at least 27 per cent of the toxemias of pregnancy that he has studied have some evidence of urinary infection. These examples from three different fields of medicine illustrate the importance of the subject.

The chronicity of pyelitis and pyelonephritis should be emphasized. These patients must be carefully observed for very long periods of time even after adequate chemotherapy. As Dr

McCann has pointed out, the cause of the infection must be found and corrected if feasible. No patient who has had a urinary infection should be discharged without definite evidence that the infection has permanently disappeared.

Pregnancy is to a certain extent a controllable factor. To allow a pregnancy to proceed in the face of a urinary infection or proceeding "toxemia" is to court disaster unless the situation receives extraordinarily careful and repeated evaluation, as evidence of irreparable damage may appear with explosive suddenness.

The fact that hypertension at its inception is remediable providing its cause can be eliminated should be emphasized. Further and repeated insults cause irreversible changes.

Hypertension and renal insufficiency are symptom complexes. Therefore, they probably have many causes. Nevertheless, the importance of the material presented by Dr McCann cannot be too strongly stated.

Dr Nathaniel Kutzman, *Buffalo, New York*—In view of the high incidence of hypertension and urinary tract infection in diabetes, we felt that a study of this group would be of value. Fifty female diabetics between the ages of 40 and 70, who were admitted to Dr Bowen's clinic and to the wards of the Buffalo General Hospital were investigated. They were taken consecutively. Most of them were ambulatory patients and had no urologic complaints. The results of this study are as follows:

#### *Lower Urinary Tract*

- I Cases studied—50
- II No urinary pathology—4 cases
- III Lower urinary tract involvement alone—14 cases
- IV Lower urinary tract involvement in all cases
  - A Chronic cystitis—32 cases
  - B Cystoceles—32 cases
  - C Stricture of urethra—18 cases

#### *Cystoceles*

- 1 Cystocele  
Stricture of urethra 7 cases  
Residual urine
- 2 Cystocele  
Stricture of urethra 8 cases  
No residual urine
- 3 Cystocele  
No stricture 8 cases  
Residual urine
- 4 Cystocele  
No stricture 9 cases  
No residual urine

#### *Relationship to Hypertension*

- I Lower urinary tract involvement alone  
Normal blood pressure—5 cases  
Hypertension—9 cases
- II Upper urinary tract involvement

- 1 No impairment of kidney function from either side was found in 32 cases  
Normal blood pressure—14 cases  
Hypertension—18 cases
- 2 (a) Leukocytes and bacteria from both kidneys with impairment of function (true bilateral pyelonephritis)—all 3 cases  
Normal blood pressure—0 cases  
Hypertension—3 cases  
(b) No leukocytes, no bacteria, impaired function both sides (True medical nephritis)—2 cases  
Normal blood pressure—0 cases  
Hypertension—2 cases
- 3 Leukocytes, bacteria, impairment of function one kidney—11 cases  
Normal blood pressure—3 cases  
Hypertension—8 cases
- 4 Leukocytes, bacteria from both kidneys, normal function—4 cases  
Normal blood pressure—1 case (few leukocytes with pure culture of anaerobic streptococci of both kidneys and bladder)  
Hypertension—3 cases
- 5 Impairment of kidney function either unilateral or bilateral—17 cases  
Normal blood pressure—4 cases  
Hypertension—13 cases  
Unable to obtain divided function—1 case
- 6 All cases but 2 who had impaired kidney function had either a hydronephrosis or leukocytes and bacteria coming from one or both kidneys
- 7 Three cases had unilateral hydronephrosis with normal function. Infecting organisms found were predominantly,
  - (1) Colon bacilli
  - (2) Enterococcus or Streptococcus faecalis
  - (3) Bacillus aerogenes
  - (4) Streptococcus hemolyticus

We find that there is evidence that infection and impairment of the urinary tract does occur quite frequently in the diabetic, perhaps to a greater degree than in a similar group of women who are not diabetic. We feel that many of these patients who have a lower urinary tract involvement alone, potentially have the makings of upper urinary tract disease, especially those having stricture of the urethra, cystitis, and residual urine. Back pressure with infection will undoubtedly involve the upper urinary tract. We have noted the high incidence of hypertension in bilateral infection of the kidneys with diminished function (true bilateral pyelonephritis). In unilateral infected kidneys with diminished function there is also a tendency toward hypertension (unilateral pyelonephritis). Infections and stasis play important roles in diminishing kidney function and hypertension.

# THE PROGNOSIS OF NEPHRITIS AND NEPHROSIS IN CHILDHOOD

HERMAN SCHWARZ, M D , JEROME L KOHN, M D ,  
and SAMUEL B WEINER, M D , New York City

(From the Pediatric Service of the Mount Sinai Hospital)

**N**EPHRITIS in childhood presents many interesting phases. There are many clinical, pathologic, and physiologic questions which must be solved. But paramount in importance to the active clinician and the patient is the question of the future course of the disease.

The prognosis in nephritis has interested us for many years. The recent advances in pathology, chemistry, and physiology have led to a better classification and broader understanding of nephritis. Our conception of the course of the disease has therefore improved. We have made a clinical study of all cases of nephritis and nephrosis admitted to the Pediatric Service of the Mount Sinai Hospital from 1911 to 1937. Twenty-five additional cases seen in the private practice of one of us are also included.

## Material and Method

In 1925 a well-organized and independent follow-up clinic was established at the Mount Sinai Hospital. Since that time all patients with nephritis and nephrosis who were discharged from the hospital were referred to this clinic. Patients were seen at least twice a year, and more often when necessary. Delinquent patients were contacted and urged to come. If no response was obtained, they were visited by a social service worker. Prior to 1925 the Pediatric Service had its own follow-up clinic where these patients were seen at regular intervals.

In all, 394 patients with nephritis comprised the material of this study. We were able to follow 227 patients (57.6 per cent) after their discharge from the hospital. In a city as large as New York, this loss of material is to be ex-

pected since people change their residence very frequently.

## Classification

It seems logical to us to divide these cases which we have followed into four clinical groups. Thus, of course, excludes (1) the acute infection of the kidney, secondary to bacteremia of various kinds, (2) the lesion of the kidney associated with the acute and chronic cases of pyelitis, (3) the kidney lesions secondary to developmental defects, to congenital deformity of the kidney, and to obstructive lesions in the urinary tract, (4) the occasional malignant hypertension nephritis in the young due to any of the above underlying conditions.

These above-mentioned clinical groups are made with the definite understanding that we are really unable to make pathologic diagnoses of kidney lesions at the bedside and that the diagnosis is actually a clinical one. They include (1) acute nephritis, (2) chronic nephritis of the nonprogressive type, (3) chronic nephritis of the clinical progressive type, (4) nephrosis.

These four major designations of Bright's disease in children are well understood and accepted by all pediatricians. The clinical and diagnostic criteria are quite uniform and are as follows.

*Acute Nephritis*—Usually follows or is concomitant with an infection. It is characterized by hematuria and albuminuria of short duration, usually not over six months, rarely a year or more. Edema of mild degree at the onset may or may not be present. Occasionally albuminuria and edema alone are present. Hypertension and convulsions are present in some cases at the onset of the disease.

McCann has pointed out, the cause of the infection must be found and corrected if feasible. No patient who has had a urinary infection should be discharged without definite evidence that the infection has permanently disappeared.

Pregnancy is to a certain extent a controllable factor. To allow a pregnancy to proceed in the face of a urinary infection or proceeding "toxemia" is to court disaster unless the situation receives extraordinarily careful and repeated evaluation, as evidence of irreparable damage may appear with explosive suddenness.

The fact that hypertension at its inception is remediable providing its cause can be eliminated should be emphasized. Further and repeated insults cause irreversible changes.

Hypertension and renal insufficiency are symptom complexes. Therefore, they probably have many causes. Nevertheless, the importance of the material presented by Dr McCann cannot be too strongly stated.

Dr Nathaniel Kutzman, *Buffalo, New York*—In view of the high incidence of hypertension and urinary tract infection in diabetes, we felt that a study of this group would be of value. Fifty female diabetics between the ages of 40 and 70, who were admitted to Dr Bowen's clinic and to the wards of the Buffalo General Hospital were investigated. They were taken consecutively. Most of them were ambulatory patients and had no urologic complaints. The results of this study are as follows:

#### *Lower Urinary Tract*

- I Cases studied—50
- II No urinary pathology—4 cases
- III Lower urinary tract involvement alone—14 cases
- IV Lower urinary tract involvement in all cases
  - A Chronic cystitis—32 cases
  - B Cystoceles—32 cases
  - C Stricture of urethra—18 cases

#### *Cystoceles*

- 1 Cystocele  
Stricture of urethra  
Residual urine 7 cases
- 2 Cystocele  
Stricture of urethra  
No residual urine 8 cases
- 3 Cystocele  
No stricture  
Residual urine 8 cases
- 4 Cystocele  
No stricture  
No residual urine 9 cases

#### *Relationship to Hypertension*

- I Lower urinary tract involvement alone
  - Normal blood pressure—5 cases
  - Hypertension—9 cases
- II Upper urinary tract involvement

- 1 No impairment of kidney function from either side was found in 32 cases  
Normal blood pressure—14 cases  
Hypertension—18 cases
- 2 (a) Leukocytes and bacteria from both kidneys with impairment of function (true bilateral pyelonephritis)—all 3 cases  
Normal blood pressure—0 cases  
Hypertension—3 cases  
(b) No leukocytes, no bacteria, impaired function both sides (True medical nephritis)—2 cases  
Normal blood pressure—0 cases  
Hypertension—2 cases
- 3 Leukocytes, bacteria, impairment of function one kidney—11 cases  
Normal blood pressure—3 cases  
Hypertension—8 cases
- 4 Leukocytes, bacteria from both kidneys, normal function—4 cases  
Normal blood pressure—1 case (few leukocytes with pure culture of anaerobic streptococci of both kidneys and bladder)  
Hypertension—3 cases
- 5 Impairment of kidney function either unilateral or bilateral—17 cases  
Normal blood pressure—4 cases  
Hypertension—13 cases  
Unable to obtain divided function—1 case
- 6 All cases but 2 who had impaired kidney function had either a hydronephrosis or leukocytes and bacteria coming from one or both kidneys
- 7 Three cases had unilateral hydronephrosis with normal function. Infecting organisms found were predominantly,
  - (1) Colon bacilli
  - (2) Enterococcus or Streptococcus faecalis
  - (3) Bacillus aerogenes
  - (4) Streptococcus hemolyticus

We find that there is evidence that infection and impairment of the urinary tract does occur quite frequently in the diabetic, perhaps to a greater degree than in a similar group of women who are not diabetic. We feel that many of these patients who have a lower urinary tract involvement alone, potentially have the makings of upper urinary tract disease, especially those having stricture of the urethra, cystitis, and residual urine. Back pressure with infection will undoubtedly involve the upper urinary tract. We have noted the high incidence of hypertension in bilateral infection of the kidneys with diminished function (true bilateral pyelonephritis). In unilateral infected kidneys with diminished function there is also a tendency toward hypertension (unilateral pyelonephritis). Infections and stasis play important roles in diminishing kidney function and hypertension.

nephritis The sediment in 24 of these 25 cases was within the normal range The remaining case showed a pathologic sediment and on reinvestigation was shown to have a complicating hydro-nephrosis

Personally, we have taken a midway position There is no doubt that a certain number of acute nephritis cases recover completely and show no renal involvement even during subsequent severe infections However, we do see a certain number of patients who show albuminuria and casts during a subsequent infection In these patients we have wondered if the nephritis was again manifesting itself We have therefore added what we call the illness test which we believe is important clinically By the illness test we mean how well the kidney withstands infection after apparent recovery from acute nephritis

We also feel that clinically there are two distinct types of chronic nephritis One type is a nonprogressive disease which is not disabling The other type is progressive and often rapidly fatal Much longer periods of observation are necessary to establish the relationship of the nephritis of adult life to an attack in childhood It is notoriously difficult to obtain a history of acute nephritis in childhood from an adult 40 to 60 years old

The mortality in chronic progressive nephritis is very high and if these patients are followed for a long period of time an increasing number die within several years

The reports about nephrosis are difficult to classify because of the early confusion in terminology, and the error in diagnosing a case of chronic nephritis with edema as lipid nephrosis Most studies in lipid nephrosis show a 50 per cent mortality

## Results

*Acute Nephritis*—In all 244 cases were seen Of these only 1 patient had two attacks which were separated by a period of two years The ratio of male to female was 2 to 1 Fifteen cases gave a

TABLE 2—TABLE SHOWING AGE INCIDENCE AND MORTALITY BY AGE OF ACUTE NEPHRITIS CASES

Age (Years)	Total Patients	Patients Ceased
Under 1	5	3
1	8	1
2	23	
3	30	
4	27	3
5	28	1
6	20	1
7	25	
8	21	1
9	17	
10	17	
11	13	
12	9	2
13	2	1
14	1	
15	1	
Total	244	13

history of scarlet fever before the onset of the nephritis One case followed varicella, and 1 case followed an extensive burn In the remaining cases there was either a history of preceding respiratory infection or no history of any infection

Thirteen patients died (5.3 per cent) All of these children died soon after the onset of their nephritis It is interesting to note that 4 of the 13 fatal cases were one year old or under (Table 2) In 9 of the fatal cases there was some complicating factor, the nephritis alone not necessarily being the determining factor

We were able to follow 120 of the 230 living patients after their discharge from the hospital The period of follow-up varied from one to sixteen years with an average of about four to five years per patient (Table 3)

At their last examination 101 patients were completely recovered and showed no signs of any nephritic process as judged by general examination, urinalysis, and blood pressure The remaining 19 cases had to be divided into three groups In the first group of 7 cases definite chronic progressive nephritis was present within three years In the second group of 7 additional cases there was elevated blood pressure and some urinary abnormality These children show evidence of renal impairment but cannot as yet be classified as definite progressive chronic nephritis This second group has been observed from one to seven years and the children have remained in relatively good condition In the third group of 5 cases there



TABLE 1—STATISTICAL SUMMARY OF PRINCIPAL CONTRIBUTIONS TO PROGNOSIS IN NEPHRITIS

Author	Acute Nephritis				Chronic Nephritis		Nephrosis Mortality Recovery		
	Number of Cases	Years Followed	Mortality (Percentage)	Developed Chronic Nephritis	Cases	Mortality (Percentage)	Cases	(Per-centage)	(Per-centage)
Lyttle and Rosenberg	74	1-5	5.4	15.5					
Addis and Snoke	178*		21	54%†					
Blackfan	24		12.5						
Clausen	102		18.6						
Patterson and Wylie	27		3.7		23‡	43.5	11	63.6	36.4
Davison and Salinger					20	30			
Aldrich	129	5-10	6.2	0.8	24	54.2	7	35	40
Levy	120	1	8.3	10					
Tallerman	29	1½	6.9	16					

\* All cases

† Active cases of nephritis

‡ Tubular nephritis.

*Chronic Nephritis of the Clinically Non-progressive Type*—A patient was not considered cured of his acute nephritis when there was persistent albuminuria, hematuria, or casts for more than six months. Chronic clinically nonprogressive nephritis was diagnosed if the child remained in status quo with perhaps occasional albuminuria, at times increased blood pressure, or, in response to an infection, increased albuminuria. Perhaps nephropathia according to Aschoff would be the word applied to this condition. Just what the pathology of the kidney is, is not known, for the children do not die of this type of nephritis. Whether it makes for adult nephritis is also not known. Most frequently we believe that the nephritis is cured, but a long enough follow-up in cases of childhood nephritis has not been completed thus far.

*Chronic Nephritis of the Clinically Progressive Type*—Commonly called chronic progressive nephritis of childhood goes on rather rapidly to progressive anemia, azotemia, hypertension, and death. There may or may not be edema in these cases. Retention of nitrogen or other functional deficiencies may appear very soon. At least one year passes before we make up our minds whether or not to make this diagnosis definite. This is not the place to discuss why one case progresses and the other does not. Perhaps infectious foci have something to do with it. Perhaps the characteristics of the mesenchyme one is born with has something to do with it.

The criteria for the diagnosis of lipid nephrosis have been described in two

previous communications by Schwarz and Kohn.

There were few cases that were difficult to classify after twelve months of observation. It was easy to say that the patient was suffering from chronic clinically progressive nephritis. However, it was often difficult to diagnose chronic clinically nonprogressive nephritis or the gradual recovery of the nephritis.

### Literature

There are many reports of follow-up studies in nephritis varying from one- to ten-year periods. We have statistically summarized the most important contributions (Table 1).

There are two schools of thought relative to the ultimate outcome of acute nephritis. The first group believes that the disease is self-limited and distinct from chronic nephritis, rarely, if ever, passing into the latter. This school is headed by Aldrich and Lyttle. On the other hand, the second group, headed by Addis and Snoke, believe that a great many cases of acute nephritis become chronic. These latter workers consider acute glomerular nephritis as an initial or intermediate manifestation, and chronic nephritis as a terminal manifestation of the same disease. Addis and Snoke have pointed out the presence of pathologic urinary sediment findings by means of the Addis count in patients who are otherwise well following acute nephritis. Evidently there is disagreement on this point. Aldrich carefully did Addis counts on 25 patients representing a cross section of 250 recovered cases of acute

or nonprogressive at present. There is 1 additional case followed for three years, which has showed no evidence of nephritis for the past two years, as judged by general examination, urinalysis, and blood pressure. We might say this is the rare case which after a year of illness may recover entirely.

Obviously chronic nephritis is a grave illness. Over 50 per cent of the children afflicted with this disease die within one year of the onset of the illness. Very few (8 per cent) live more than five years. Extremely few show any evidence of arrest of the disease process. When recovery does take place it usually occurs in the first year of illness.

*Lipoid Nephrosis*—Since 1922 we have had 35 cases of lipoid nephrosis. A complete review of most of these cases has been presented by Schwarz and Kohn. To date 17 cases have ceased, 15 within one year of the onset of the disease. We had 5 postmortem examinations and these have confirmed our diagnosis.

Of the 18 living patients, 9 remained well from one to eleven years. There are 2 additional children who occasionally have some albuminuria and formed elements, but no edema. Three other children have gross albuminuria and periods of edema. One child followed for eleven years has been well and showed no abnormalities for years. At present she is approaching puberty and has some albuminuria and elevated blood pressure. It is difficult to decide whether or not this child is developing chronic nephritis.

We feel that lipoid nephrosis is a distinct disease. It has a mortality of about 50 per cent. A large number of the remaining 50 per cent recover from this disease within three to five years of its onset. Just what will happen to this group of presumably well children when they reach maturity, we cannot tell except by further observation.

### Comment

We feel definitely that a great many cases of acute nephritis usually recover enough for perfect well-being and normal growth at development. With regard to

TABLE 5—TABLE SHOWING FOLLOW-UP STUDY OF 35 CASES OF LIPOID NEPHROSIS

Years Followed	Ceased	Well	Active Nephrosis	Nephrosis Inactive (?Well)	Not Followed
1	15	1	2		3
2	1	1		1	
3	1		1		
4		1*			
5					
6					
7		2			
8		1			
9		1			
10					
11		1	1†	1	
12		1			
Total	17	9	4	2	3

\* Cholesterol still high.

† Developing Chronic Nephritis (?)

complete cure of the kidney from a pathologic point of view, we hesitate to make a definite statement. Further follow-up and study of this group of patients into adult life are necessary to decide this important problem.

We also feel that there is a progressive type and nonprogressive type of chronic nephritis. The former is a rapidly fatal disease. The latter is compatible with general well-being for a long time.

### Conclusions

1. A clinical study of 388 nephritis cases covering a twenty-five-year period is presented. Almost 60 per cent of these patients were followed after discharge from the hospital.

2. The cases fall into four clinical groups: (1) acute nephritis, (2) chronic nephritis—clinically nonprogressive type, (3) chronic nephritis—clinically progressive type, (4) lipoid nephrosis.

3. The immediate mortality in acute nephritis is 5 per cent. Eighty-five per cent seem to recover and remain free of nephritis as evidenced by general examination, urinalysis, and blood pressure, 10 per cent develop chronic nephritis, either progressive or nonprogressive clinically.

4. Patients admitted with a diagnosis of chronic nephritis have a mortality of over 50 per cent in the first year of illness. Only 8 per cent of our patients of this group have lived longer than five years. Only isolated cases show an arrest of the disease.

TABLE 3—FOLLOW-UP OF 120 ACUTE NEPHRITIS PATIENTS

Years Followed	Total Cases	Well	Developed Chronic Nephritis	Probably Developed Nonprog Chronic Nephritis	Probably Well
1	27	20	4	2	1
2	20	17	1	1	1
3	18	15	2	1	
4	17	15		1	1
5	7	6			1
6	8	6		1	1
7	3	3			
8	3	2		1	
9	4	4			One case re-admitted with two attacks
10	4	4			
11	3	3			
12	4	4			
13	1	1			
14	1	1			
Total	120	101	7	7	5

TABLE 4—TABLE SHOWING RESULTS OF FOLLOW-UP OF 62 PATIENTS WITH CHRONIC GLOMERULAR NEPHRITIS

Years Followed	Ceased	Active Nephritis	Nephritis Inactive
1	30	8	3
2	4	2	
3	1	5	1
4	1	1	
5	1		
6		1	
8		2	
9		1	
10		1	
Total	37	21	4

is occasional albuminuria only. We do not know if these children have non-progressive nephritis. They seem well, but we would prefer to observe them further and perhaps reinvestigate them before classifying them definitely.

We may therefore conclude that of this group of acute nephritis, 5 per cent died during the initial manifestation of their disease. Of those surviving, 84.1 per cent seemed to have recovered completely and showed no renal impairment after a fairly long follow-up. Another 42 per cent have still to be observed before being classified as recovered. The remaining 11.7 per cent showed definite renal impairment. Half may be definitely diagnosed as chronic progressive nephritis and the other half may also fall into this group.

What are some of the characteristics of those children who have developed chronic progressive nephritis? The urinary changes persist. Hypertension may or may not develop and occasional edema may be present. Nitrogen retention is not prominent. The child's appetite

and general condition is not satisfactory. There is loss of weight, edema develops, and the patient's turgor and color are poor. Usually progressive azotemia with or without hypertension ends the picture.

We cannot be certain that all the patients with acute nephritis did not have some previous kidney disease. It is possible, therefore, that these cases which develop into chronic nephritis were in reality an acute exacerbation of the latter disease when first seen. A definite opinion on this point is not possible. One must stress the point, however, that at the onset the cases that progress are indistinguishable from the ordinary run of acute nephritis.

*Chronic Nephritis*—Under acute nephritis we have discussed a group of patients who have developed chronic nephritis of a progressive or nonprogressive type. Another group of 115 patients on their first admission to the hospital were considered to have chronic nephritis. We were able to follow only 54 per cent of our cases after discharge.

Of the 62 patients followed, 37 have ceased (59.7 per cent). The duration of the disease in 30 of these children was less than one year (81 per cent). The remaining 25 children were still living from one to ten years after their initial attack (Table 4). Of the latter group only 5 children have lived longer than five years, and all have an active nephritic process. We have 3 recent cases which have improved after one year, so that we have to classify them as inactive.

# FRIEDREICH'S ATAXIA ASSOCIATED WITH DIABETES MELLITIS

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THE neurologic disorder known as Friedreich's ataxia is generally considered to be a heredodegenerative disease of the central nervous system. Although it is doubtful whether a definite and rigid distinction between the spinal (Friedreich)<sup>1</sup> and the cerebellar (Marie)<sup>2</sup> forms of hereditary ataxia is justifiable, the cases that we are about to describe would, in such a classification, be grouped as instances of Friedreich's disease. The consensus favors the origin of this neurologic disorder, wholly or chiefly, on the basis of an anomaly or predisposition of the central nervous system, but the exact manner whereby it has been propagated has not as yet been clearly determined. The course of the disease is progressive and no effective therapy is available.

Although the introduction of insulin as a specific and effective mode of therapy in diabetes has resulted in a radically altered prognosis, the etiology and pathology of this endocrine disorder, in many respects, have remained enigmatic. Therefore, when one finds linked together two conditions such as Friedreich's ataxia and diabetes mellitus, a careful study of the individual cases is indicated with the hope of possibly discovering some unknown factors which may lead to a better understanding of either one or both of these conditions.

The subject of "neural and extra-neural anomalies" occurring in Friedreich's ataxia has been reviewed in detail by Alpers and Waggoner.<sup>3</sup> However, they made no mention of the rare occurrence of diabetes mellitus as an associated disorder. A survey of the literature reveals that there have been 18 cases described in which such an association has been observed. We are able to

add 2 cases to this series making a total of 20 cases (Table 1).

## Case Reports

**Case 1**—M D., female, aged 13, born in U S A., was first admitted to Montefiore Hospital on August 28, 1930, with history of unsteadiness in walking since 6 years of age, neurologic picture characteristic of Friedreich's ataxia and associated with evidence of status dysraphicus and polyglandular endocrine dysfunction, gradual progression of neurologic symptoms with development of diabetes mellitus at 15 years of age.

Chief complaint was the inability to walk straight. Family history revealed that her parents were second cousins and that in Russia there existed a family group resulting from a marriage between the father's brother and mother's sister. (Efforts to communicate with this collateral branch of the family have been unsuccessful.) Patient was the youngest of 5 siblings. One brother had infantile paralysis in childhood. One sister (Case 2) had an illness similar to that of the patient.

Birth and early development of patient seem to have been essentially normal. Illnesses during infancy consisted of measles at 4 years and diphtheria at 5 years. A tonsillectomy was performed at 6 years of age. School attendance started at 5½ years of age and excellent progress was made by the patient. Onset of the present illness occurred between 5 and 6 years of age during convalescence from diphtheria, when it was noticed by other people that the patient was unsteady in walking and had slight difficulty in using her hands. These symptoms gradually became more marked and at 8 years of age various hospital clinics were visited. Diagnosis at that time was "St. Vitus' Dance" but treatment was ineffective. At 10 years of age patient was admitted to the Neurological Institute where a diagnosis Friedreich's ataxia was made. Psychometric examinations revealed an I Q of 114. Laboratory studies were negative. Subsequently, treatment consisted largely of physiotherapy but symptoms progressed es-

5 In our series of lipoid nephrosis the mortality was 50 per cent in the first year. Nine of the remaining patients recovered after several years of illness. The disease is distinct from chronic nephritis.

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### THE UNITED STATES PHARMACOPŒIAL CONVENTION

This is the second call for the Decennial Meeting of the Convention for the Revision of the *Pharmacopœia of the United States of America*, to be held at Washington, D. C., beginning May 14, 1940.

In compliance with the provisions of the Constitution and Bylaws of the United States Pharmacopœial Convention, I hereby issue this second call to the several bodies entitled under the Constitution to representation therein to appoint three delegates and three alternates to the Decennial Meeting of the Convention for the Revision of the *Pharmacopœia of the United*

States of America, which is to meet in Washington, D. C., on May 14, 1940.

WALTER A. BASTEDO, M. D., *President, United States Pharmacopœial Convention*

NOTICE—In order that the records may be brought up-to-date and checked, that card files may be prepared, and that the other functions of the Committee on Credentials may be performed, it is desirable that the credentials of all delegates appointed to attend this decennial meeting shall be in the hands of the Secretary, Mr. L. E. Warren, 2 Raymond St., Chevy Chase, Maryland, not later than March 15, 1940.

### AMERICAN BOARD OF INTERNAL MEDICINE, INC.

The American Board of Internal Medicine will conduct oral examinations just previous to the meeting of the American College of Physicians in Cleveland and just in advance of the meeting of the American Medical Association in New York City.

Applicants who have successfully passed the written examination and plan to take the oral examination in 1940, should advise the office of

the Secretary at least six weeks in advance of the date of the examination they desire to take.

The next written examination for 1940 will be given on October 21. Applications for this examination must be filed in the Secretary's office by September 1.

Application forms may be obtained from Dr. William S. Middleton, Secretary-Treasurer, 1301 University Avenue, Madison, Wisconsin.

### WHERE WE ARE HEADED FOR

One out of every 22 children born today will become a patient in a mental hospital, according to present authoritative data. According to the same data, 1,000,000 children now in public schools will suffer a mental breakdown some time in their lives, unless something is done about it. This was stated in a recent lecture by Dr. Walter L. Treadway, chief medical officer of the U. S. Public Health Service and lecturer in psychiatry in the University of California Medical School, as reported in *California and Western Medicine*.

The number of mental cases per one hundred thousand population is now more than four times what it was eighty years ago. It is now necessary to spend more than \$200,000,000 annually for mental patients who require segregation.

Regarding the treatment of mental ailments

Doctor Treadway said, "If physicians of today and tomorrow are to fulfill their responsibility, then it is necessary that they take cognizance of the forces at work in their community as they affect their patients. Mass study of such forces, however, is a function peculiar to the discipline of epidemiology and sociology."

"The recognition, care, and treatment of mental illness implies a knowledge of these conditions. While it is true that no state legislature has kept pace with the needs of the mentally ill, nevertheless in those states where mental health administration is directed by medically trained persons, the facilities and public policies affecting the mentally ill are far ahead of those jurisdictions where hospital facilities alone represent the assumed total of a community's obligation and responsibility toward mental disease and disorder."

TABLE 1—SERIES OF CASES HAVING FRIEDREICH'S ATAXIA ASSOCIATED WITH DIABETES MELLITUS—20 CASES

	Author	Sex	Age at Ataxia	Onset of Diabetes	Result	Neuropathology	Remarks
1	Rossi <sup>20</sup> (1893)	F		18?	Death	Typical myelopathy circumscribed sclerosis in medulla scattered areas of degeneration subcortically including basal ganglia	Friedreich's ataxia in both cases existed long before onset of diabetes
2				16?			
3	Burr <sup>21</sup> (1894)	F	10	25?	Death	Typical myelopathy brain pathology not given	A brother also had Friedreich's ataxia
4	Best <sup>22</sup> (1899)	F	7	14	Death in coma		Acute onset of diabetes two weeks before death therapy ineffective
5	Mingazzini and Peruzzi <sup>23</sup> (1904)	M	10	17	Death in coma	Typical myelopathy slight rarification of periventricular fibrous network in medulla in mesencephalon found nothing noteworthy	A sister also had Friedreich's ataxia was physically underdeveloped and showed menstrual irregularities
6	Meltzer <sup>24</sup> (1908)	M	26	27	Death	Typical myelopathy brain pathology not given (Schloss <sup>25</sup> )	Diabetes temporarily controlled by an almost complete carbohydrate free diet pancreas showed almost complete absence of islet tissue
7	Frey <sup>27</sup> (1912)	F	7	22	Death		Terminal inanition with tachycardia and arrhythmia
8		F	5	34	Death in coma	Typical myelopathy brain pathology not given	Had irregular menses and an infantile uterus Two brothers and one sister also had Friedreich's ataxia
9	Kalinowsky <sup>28</sup> (1929)	M	14	31	Death at 31 years of age	Typical myelopathy brain pathology not given	Two brothers and one sister also had Friedreich's ataxia
10	Mollaret <sup>19</sup> (1929)	F		31	Living at 33 years of age		Single episode of severe diabetes with coma and followed by subsidence ultimately requiring no specific therapy
11	Schloss <sup>25</sup> (1932)	F*	21	26	Living at 27 years of age		Had diet plus insulin therapy but diabetes difficult to control at times
12		M*	15		Living at 24 years of age		Showed slight glycosuria after test with high carbohydrate diet no progression of diabetic symptoms
13	Wichtl <sup>25</sup> (1933) (also Basch <sup>40</sup> )	M	5	8	Death in coma at 12 years of age	Typical myelopathy marked degenerative change in dorsal vagus nucleus and in dentate nuclei basal ganglia and tuber cinereum negative	Diabetes required progressively increasing insulin dosage epileptic seizures noted at 9 years of age
14	Curtius Schoenberg and Stoerring <sup>12</sup> (1935)	F*	7	12	Living at 20 years of age		Had irregular menses diabetes controlled by diet and progressively increasing insulin dosage
15		F*	16	22	Living		Diabetes controlled by diet plus insulin had epileptic seizures
16	Lunedes and Liesch <sup>19</sup> (1935)	F*	14	14	Death at 17 years of age	Typical myelopathy	Had Simmonds' disease and cardiorespiratory syndrome
17		F*	15	35	Death at 36 years of age		Diabetes treated by diet had amenorrhea and cardiorespiratory syndrome
18		M*	17	38	Living at 41 years of age		Diabetes controlled by diet plus insulin therapy early in course of illness showed positive blood Wassermann and reaction which became negative after specific arsenic therapy had cardiorespiratory syndrome
19	Schlesinger and Goldstein	F*	6	15	Living at 21 years of age		Diet plus insulin therapy but diabetes difficult to control at times has evidence of multiple endocrine hypofunction
20		F*	15	21	Living at 28 years of age		Diet plus insulin therapy but diabetes difficult to control at times has physical underdevelopment, infantile uterus and irregular menses

\* Siblings.

pecially the unsteadiness in walking, so that patient often tripped while walking. There was history of occasional urinary incontinence when laughing. Menstruation started at 11½ years of age and was regular in all respects.

*Physical Examination*—Patient appeared to be a well-nourished, well-developed, cheerful, intelligent girl who was ambulatory and co-operated well during examination. There was a slight kyphoscoliosis of the thoracic spine. Feet showed pes cavus with talpes equinovarus bilaterally and spontaneous extension of the great toes. The metacarpophalangeal joint of the left fourth digit was markedly depressed. Heart, lungs, and abdomen were grossly normal. Blood pressure was 80/55.

*Neurologic Examination*—Gait broad based and ataxic. Slight incoordination in finger to nose test, marked incoordination in heel to knee test noted bilaterally but more so on the left.

Rebound phenomenon present in all extremities. There was definite paresis of lower extremities. Pseudoathetotic movements of fingers and an intention tremor of hands and head were elicited. There was tendon areflexia in all extremities. Abdominal reflexes were present and active. Babinski and Chaddock signs noted bilaterally. Disturbances in sensation consisted of loss of position sense in the toes, pallhyesthesia in the lower extremities, and an irregular distribution of hypesthesia for superficial modalities. Cranial nerve functions were normal with no evidence of dysarthria or nystagmus.

*Laboratory Data*—Urinalysis and blood count normal. Spinal fluid clear and colorless with negative Pandy and a total protein of 40.2 mg. Blood and spinal fluid serology was negative for evidence of syphilis. Roentgenography of hands showed the left fourth metacarpal to be about half the length of that on the right and a similar but less marked shortening of the left third metacarpal bone was noted.

*Course*—During initial period of hospitalization there was no noticeable change in patient's condition. She was discharged on January 13, 1931, as unimproved. During the interval at home there was a gradual progression of neurologic signs accompanied by occasional sudden exacerbations lasting one or two days when the patient would feel much weaker and be unable to walk. After April, 1932, it was noted that patient was unable to walk without support because of the marked ataxia and weakness of the legs.

In August, 1932, there appeared polydipsia, polyphagia, and polyuria. These symptoms rapidly increased in intensity and were accompanied by a gradual loss of weight. A diagnosis

of diabetes mellitus was made shortly before re-admission on November 5, 1932. Examination showed some fullness of neck suggestive of an enlarged thyroid gland, a seborrheic dermatitis, and an increased intensity of ataxia. Other signs were same as noted previously. Laboratory studies revealed glycosuria of 1 to 3 per cent, fasting blood sugar of 182 and blood urea nitrogen of 13.7 mg., B.M.R. of -31 per cent, normal gastric analysis. During second period of hospitalization constipation was a constant feature and was associated with occasional acute episodes of abdominal pain and vomiting suggestive of appendicitis. There was considerable fluctuation in the degree of hyperglycemia but at time of discharge on July 1, 1933, stabilization was accomplished on the basis of a diabetic diet (C 125, P 75, F 125) plus insulin (UX and UV). Amenorrhea for a period of three months occurred during her stay in the hospital and recurred immediately after discharge, persisting for three years until July, 1936. During interval preceding her third admission increased general weakness and ataxia were noted. In addition there appeared to be a gradual diminution in the size of the muscles of the arm and the inner portion of both thighs. Blurring of vision was noted at times.

Patient was re-admitted to the Montefiore Hospital on December 26, 1934, and hospitalization has been continuous ever since. Physical examinations during this time have shown, besides signs previously observed, an asymmetry in the size of the breasts and an infantile uterus. Neurologic examinations have shown increasing ataxia, weakness, and dorsal column sensory disturbances in the legs. The appearance of the fundi has been considered suggestive of temporal pallor. Laboratory studies have revealed sugar tolerance 186 (fasting), 302 (one-half hr.), 352 (one hr.), 348 (two hr.), 270 (three hr.), 238 (four hr.), blood cholesterol 200 mg and cholesterol esters 168 mg., B.M.R. -27 per cent. X-ray of skull showed sella turcica to be normal in size with no other pathologic changes observable. X-ray of the gastrointestinal tract showed delayed gastric emptying. During her present period of hospitalization patient has had recurrent episodes characterized by colicky abdominal pain, abdominal distention, nausea, and marked constipation. Patient has also occasionally complained of headache with transient blurring of vision. In November, 1935, she complained of a dull pain over the distribution of the lower two branches of the left trigeminal nerve which subsided after several days and was not accompanied by objective sensory disturbances on the face. Reappearance

pairment of position sense were noted in the distal portions of both lower extremities, more so on the left. Speech of patient was nasal in character and suggestively scanning. A ticlike retraction of the left angle of the mouth was present intermittently. Cranial nerve functions otherwise were normal.

*Laboratory Data*—Urinalysis showed a variable degree of glycosuria. Blood count was normal. Fasting blood sugar was 181 mg and urea nitrogen 10.5 mg. Spinal fluid was clear and colorless with normal manometric curve, negative Pandy, and total protein of 20.1 mg. Blood and spinal fluid serology was negative for evidence of syphilis. B. M. R. was +3. Psychometric examination revealed I. Q. of 93.

*Course*—During initial period of hospitalization considerable difficulty was encountered in controlling patient's hyperglycemia. Diet and insulin were varied but stabilization could only be temporarily achieved. Frequently fractional urine specimens would show glycosuria which would persist in spite of increased dosage of insulin and would be associated with attacks of hypoglycemia. Rapid fluctuations in the blood sugar level occurred at times. Neurologic examination in June, 1933, showed exaggeration of signs previously noted. Patient also experienced paresthesia in left arm at irregular intervals. On several occasions she complained of blurred vision which was transient in character. Period of amenorrhea present before admission was terminated by onset of menstruation a few days after admission. In September, 1934, an acute illness developed in the form of right pleurisy with effusion. This illness was afebrile and at the end of a month effusion had disappeared. Sputum examination and guinea pig inoculation of pleural fluid were negative for evidence of tuberculosis as was also x-ray of lungs. On November 10, 1934, patient was discharged, condition unimproved.

During the interval of a year at home patient became progressively weaker and ultimately was unable to walk without support. When attempting to walk she often fell and suffered many bruises. Paresthesia in the form of tingling sensations in the left hand radiating up to the elbow recurred intermittently, was usually noted at night, and seemed to subside after increases in dosage of insulin. When re-admitted on November 10, 1935, physical examination revealed same features noted on previous admission. Significant neurologic findings were inability to walk without support, marked ataxia in all extremities, dysidiadochokinesis and rebound phenomenon, nasal, slightly dyssynergic speech, ataxic, intention tremors of head,

tongue, and face, abdominal reflexes normally active, deep areflexia except for diminished jaw jerk, bilateral Babinski and Chaddock signs, generalized hypotonicity and motor weakness, more so in lower extremities, pallanesthesia in both legs and loss of position sense in the feet, slight uniform pallor of optic disks with slight uniform constriction of peripheral visual fields but with normal visual acuity. There was no gross evidence of intellectual impairment but pathologic sensitivity was noted. There was a history of occasional difficulty in starting act of urination and a history of chronic constipation. Noteworthy laboratory findings during second period of hospitalization were fasting blood sugar of 170 mg., cholesterol 248 mg. and cholesterol esters 126 mg., negative x-rays of skull and chest. While hospitalized, amenorrhea recurred at irregular intervals and persisted for periods as long as six months. On one occasion patient suddenly developed nausea, right-sided abdominal pain and leukocytosis which subsided after a few days. Despite fluctuations in level of hyperglycemia and occasional hypoglycemic reactions a fairly satisfactory stabilization was achieved by means of diet (C 130, P 80, F 100) plus insulin (UXV and UX). She was discharged on August 28, 1937, condition unimproved. Since then examination at regular intervals in O. P. D. has shown no significant change in her condition.

### Comment

The anamnestic data in these cases reveals that the onset of the neurologic disorder occurred following diphtheria in Case 1 and at the time of puberty in Case 2. There have been described in Friedreich's ataxia what appear to be precipitating etiologic factors such as acute infections,<sup>4</sup> trauma,<sup>5</sup> puberty,<sup>6</sup> etc. These factors may account for the fact that cases such as ours do not conform with the observation of "homochronicity" emphasized by Hanhart.<sup>7</sup> The genetic data in these cases show the existence of parental consanguinity and this may be regarded as favoring the development of heredodegenerative disease. It is unfortunate that a duplicate collateral branch of this family is inaccessible for investigation.

The characteristic semiology of Friedreich's ataxia is well demonstrated in both cases and needs no emphasis. However, the existence of certain unusual



of menstruation in July, 1936, was marked by a shortening of interval to three weeks, by menorrhagia, and by dysmenorrhea in the form of sharp, stabbing pelvic pains for one week preceding menstrual periods. Fluctuations in the degree of hyperglycemia have occurred suddenly and resultant difficulty in controlling diabetes has been experienced. Recently it has been possible to stabilize patient on basis of diet (C 130, P 80, F 100) plus insulin (UXX and UXV). At present neurologic picture is essentially that of a far advanced case of Friedreich's ataxia with exaggeration of neurologic signs already noted.

*Case 2*—R. D., female, aged 22, born in England, first admitted to the Montefiore Hospital on June 18, 1932, with history of difficulty in walking which appeared with menarche at 15 years of age, developed diabetes mellitus at 21 years of age, neurologic picture characteristic of Friedreich's ataxia and associated with evidence of polyglandular endocrine dysfunction, gradual progression of neurologic symptoms.

Complaints were difficulty in walking for six years and diabetes for nine months. Family history is same as that described for her sister (Case 1). Birth and early development were apparently uneventful. Illnesses during infancy and childhood consisted of incision of an infected birthmark in left axilla at 3 months, measles at 6 years, pertussis at 10 years. A tonsillectomy was performed at 10 years of age. School attendance started at 6 years of age and normal progress was made ending with graduation from high school at 18 years of age. Except for occasional cramplike pains in the muscles of her legs patient was in good physical health previous to the onset of her present illness. She is said to have always been "nervous" and emotionally unstable with irritability and violent temper as especially prominent features of her personality.

Onset of the present illness occurred at 15 years of age and was temporarily associated with the onset of menstruation. Difficulty in walking downstairs was first noted and was ascribed to stiffness of the knees and inaccurate measuring of steps. At 17 years of age difficulty in running was noted and was due to stiffness of legs together with a tendency to stumble. At 18 years of age, while employed as a stenographer, patient began to experience difficulty in walking due to poor balance and lack of proper muscle control. She was able to continue her routine activities until October, 1929, when she was accidentally struck by an automobile. Although unconscious for one hour, examination

showed no fractures and except for "mental shock" no untoward reaction was noted. Difficulty in walking gradually became more marked. There also appeared to be some unsteadiness in holding objects in hands. In September, 1930, when she was 20 years of age, patient was examined in this hospital and significant findings at that time were general physical underdevelopment, ataxic gait, Friedreich's feet, impaired position sense in feet, Babinski sign bilaterally. A diagnosis of Friedreich's ataxia was made. During the year previous to admission a change in patient's personality was noted in the form of exaggerated shyness and reserve, self-consciousness and fear of being observed. She restricted her activities because of a fear of falling and when walking outside the home had to be assisted. Paresthesia in the left forearm described as "pins and needles" occurred intermittently.

In September, 1931, shortly before developing a hordeolum, patient noticed increased thirst and polyuria. Urinalysis revealed glycosuria and a diagnosis of diabetes mellitus was made. Therapy at first consisted of diet plus insulin but latter was stopped in March, 1932. Polyuria soon recurred and symptoms of marked acidosis rapidly appeared. At this time patient was admitted to another hospital, remained there for two weeks, was discharged with diabetes controlled by means of diet plus 20 units insulin daily. Menses of patient were always regular until acidosis occurred but then amenorrhea appeared.

*Physical Examination*—Patient was a well-nourished but underdeveloped female of uniformly small stature who appeared to be several years less than her chronologic age. There seemed to be a slight fullness of the neck but the thyroid was not palpably enlarged. Skeletal changes consisted of a slight lumbar scoliosis and a pes cavus with talipes equinovarus bilaterally. There was cutis marmoratus of both lower extremities and coolness of feet. Heart, lungs, and abdomen showed no gross abnormalities. Gynecologic study revealed an infantile uterus and a nonspecific vaginitis. Blood pressure was 120/80.

*Neurologic Examination*—Gait was markedly ataxic and patient had great difficulty in walking without support. There was marked incoordination in movements of all extremities. Rebound phenomenon and dysdiadochokinesis were present. Pseudoathetosis of fingers was noted. Tendon areflexia was noted in all extremities. Abdominal reflexes were present but diminished. Babinski and Chaddock signs were elicited bilaterally. Pallesthesia and im-

"Friedreich's ataxia and status dysraphicus"

The concept of diabetogenic myelopathy is entertained on the basis of a comparison with dorsolateral sclerosis of the spinal cord which occurs in association with pernicious anemia. However, this hypothesis is a very unlikely one. It is opposed by the fact that the association of Friedreich's ataxia with diabetes mellitus is rare and by the fact that in all cases where this association has occurred the onset of the former disease has antedated the latter, usually by a period of years.

Neurogenic diabetes has been an established fact since the celebrated experimental observation of Claude Bernard. Until recently, however, there has been little progress made toward a better understanding of the mechanism involved. There has been a gradually increasing recognition that the hypothalamus is the site of important suprasegmental centers of the vegetative nervous system.<sup>13</sup> Certain experimental observations<sup>14,15</sup> have revealed the existence of a neural center in the hypothalamus which influences carbohydrate metabolism. Vonderahe,<sup>16</sup> on the basis of a pathologic study of clinical cases with diabetes mellitus, has constructed diagrammatically a neural reflex pattern which he believes may be utilized as an anatomic basis for the hypothesis of neurogenic diabetes.

Examination of the case reports in this series from the standpoint of data relevant to the concept of neurogenic diabetes discloses a relative dearth of significant material. In many of the cases the existence of diabetes was barely mentioned and received little attention clinically or pathologically. It is particularly unfortunate that in those cases where autopsies were performed neuropathologic examination was largely limited to the spinal cord. In only 2 cases<sup>17,18</sup> was there specific mention of a microscopic study of the hypothalamus and in both the findings were interpreted as being normal. Clinically there were a number of instances in which circulatory and

respiratory disturbances occurred.<sup>11</sup> These changes usually have been ascribed to involvement of vegetative centers in the medulla.<sup>19</sup> In 3 cases<sup>17,18,20</sup> there were noted degenerative changes in the medulla which affected the vagal nuclei and adjacent neural tracts. It is not possible on the basis of these observations to either prove or disprove the hypothesis of neurogenic diabetes. One should be especially guarded in any attempt to exclude the hypothalamus from further consideration since it appears that the paraventricular and other hypothalamic nuclei have not been subjected as yet to the detailed histopathologic study which should be considered mandatory in all such cases.

The not infrequent occurrence of hyperglycemia in cases of acromegaly<sup>21</sup> and of Cushing's syndrome<sup>22</sup> would appear to be clinical examples of diabetes mellitus associated with hyperpituitarism and therefore in accordance with the experimental observations of Houssay and Biasotti.<sup>23</sup> On the other hand, it must be realized that there have been reports of clinical cases in which diabetes mellitus has been found to be associated with hypopituitarism.<sup>24,25</sup> Gibson and Fowler<sup>26</sup> state that their clinical findings do not agree with the experimental findings. Evidence of endocrine dysfunction not uncommonly has been recorded as occurring in association with Friedreich's ataxia and has manifested itself in such forms as infantilism,<sup>27</sup> myxedema,<sup>28</sup> genital hypoplasia,<sup>29</sup> etc.<sup>30</sup> Data of this character seems to show that endocrine disorders occurring in patients with Friedreich's ataxia are almost always due to hypofunction of one or more of the glands of internal secretion and this is well demonstrated in our cases (*vide supra*). In view of such observations, it would appear that the diabetes occurring in cases of Friedreich's ataxia is best explained on the basis of hypofunction of the islets of Langerhans either primarily or secondarily produced. It is interesting to note that in only 1 case<sup>31</sup> in this series was the pancreas found to show histopathologic evidence of disease.

neurologic phenomena may be pointed out. Optic atrophy is present in both cases and has been recorded by other authors.<sup>8</sup> The episodic occurrence of facial paresthesia in Case 1 may be due to a lesion affecting the nucleus of the trigeminal nerve such as has been observed by Spiller.<sup>9</sup>

Extraneural anomalies are more common than generally considered and are deserving of the attention that has been given to them.<sup>3</sup> Multiple malformations are seen in our Case 1 in the form of breast asymmetry, muscle atrophy, and metacarpal abbreviation. Described as anomalies in cases of Friedreich's ataxia have been a variety of manifestations of endocrine imbalance. In our cases there is evidence of endocrine dysfunction in the form of immature body development in Case 2, markedly lowered basal metabolic rate in Case 1, infantile uterus and periods of amenorrhea in both cases. In addition, a striking feature in both cases is the apparently specific limited concurrence of diabetes mellitus with Friedreich's ataxia, and this constitutes the problem toward which most of our attention will be directed.

## Discussion

A review of all the cases in which Friedreich's ataxia has been associated with diabetes mellitus reveals certain noteworthy features (Table 1). Familial incidence is shown strikingly in the cases reported by Lunedei and Liesch<sup>10</sup> and exists in our cases. It is important to note that in some families more than one member has been affected by Friedreich's ataxia without necessarily having had diabetes but that the latter, when present, has always been associated with the former. There are 13 females and 6 males in this series with the sex undetermined in 1 case. The number of cases is too small for this differential sex incidence to be considered of definite significance but it may be contrasted with the supposedly higher incidence of Friedreich's ataxia in males. In all but 2 cases the onset of the neurologic disorder occurred during the first two dec-

ades of life. The onset of diabetes varied between 8 and 38 years of age and was antedated in all cases by the onset of Friedreich's ataxia, usually by an interval of many years. The onset of diabetes was relatively acute in most cases and the condition was usually too severe to be controlled by diet therapy alone. Until the introduction of insulin therapy death in most instances was due to diabetic coma. By means of diet plus insulin therapy it has been possible to control the diabetes and thus prolong life in these cases. Lability of the glycemic level and sudden alterations in insulin sensitivity were noticeable in our cases and caused difficulty in the maintenance of adequate therapy. Similar difficulty was noted by Schloss<sup>11</sup> in one of his cases.

As shown by our survey of the literature, the unusual combination of Friedreich's ataxia and diabetes mellitus seems to have occurred more frequently than at first suspected. Various explanations that might be offered for the concurrence of these two diseases are coincidence, hereditary predisposition, chromosome linkage, diabetogenic myelopathy, neurogenic diabetes. The incidence, as has been pointed out by Schloss<sup>11</sup> and by Curtius, Stoerring, and Schoenberg,<sup>12</sup> is greater than can be explained on the basis of coincidence. Besides, the familial occurrence of this specific combination is such as to preclude any possibility of coincidence.

Hereditary predisposition and chromosome linkage may be considered together as hypotheses which, although differing in point of emphasis, can be used to explain the familial incidence of this combination without the necessity of directly linking the two conditions to each other in a pathogenic manner. Such a point of view is supported by the occurrence of many extraneural anomalies in cases of Friedreich's ataxia which can only be explained on the basis of defects in various body systems other than the central nervous system. The idea of genetically correlated defects has been emphasized by Curtius, Stoerring, and Schoenberg<sup>12</sup> who refer to their cases as

"Friedreich's ataxia and status dysraphicus"

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A similar scarcity of pathologic evidence of pancreatic disease in cases of acromegaly and pituitary basophilism with diabetes has been pointed out by Cushing<sup>32</sup>

The hypophysis has been shown to have an important influence on many endocrine glands through the action of its tropic hormones. Therefore, the polyglandular hypofunction noted in cases of Friedreich's ataxia may be a result of a primary hypofunction of the hypophysis. Favoring the inclusion of diabetes mellitus in such a general hypothesis would be the evidence presented by Anselmino, Herold, and Hoffmann<sup>33</sup> for the existence of a pancreatropic hormone. In this connection it may be well to point out that Houssay<sup>34</sup> has emphasized the extra-pancreatic nature of the "diabetogenic" action of the hypophysis. The close relationship that exists between the hypophysis and the hypothalamus has been recognized for many years and has been the subject of considerable speculation by endocrinologists and neurologists. The presence of intimate anatomic-physiologic connections between these two structures has been well established. The hypophyseoportal vascular system was described by Popa and Fielding<sup>35</sup> and the neural connections via the infundibular stalk have been re-emphasized by Pines.<sup>36</sup> Increasingly significant roles have come to be ascribed to both the hypophysis and the hypothalamus as the respectively dominant endocrine and neural structures which are concerned in controlling the visceral functions of the body. It is not surprising that the conception of a neuro-endocrine system has been evolved in which the hypophysis-hypothalamic region is assigned the dominant role.

Our personal observations as well as a review of those in the literature do not permit us to arrive at any definite conclusion regarding the pathogenesis of the diabetes mellitus which we have shown to be a rare but definitely noncoincidental occurrence in Friedreich's ataxia. We believe that cases such as the ones described in this article do serve as a basis for hesitation before accepting the "dia-

betogenic" action of the hypophysis as an explanation for the origin of the clinical entity, diabetes mellitus. These cases also serve to direct our attention to those portions of the central nervous system which regulate certain functions of the autonomic nervous system and to re-examine the evidence which may support the hypothesis of a reciprocally interacting neuroendocrine mechanism. It is hoped that our report may be of some interest, more especially to those who are engaged in the investigation of the neuro-genic aspect of diabetes mellitus.

### Summary and Conclusions

There are described the clinical records of two sisters who have developed diabetes mellitus during the course of a specific neurologic disorder, Friedreich's ataxia. Besides various extraneural anomalies these patients show evidence of endocrine dysfunction in the form of hypopituitarism, hypothyroidism, and hypogonadism.

A review of the literature discloses that the unusual concurrence of diabetes mellitus and Friedreich's ataxia has been reported previously in no less than 18 cases. Familial incidence has been noted four times affecting a total of 9 cases and, without exception, diabetes has been present only in siblings affected by Friedreich's ataxia while the reverse has not been true. In all instances the onset of the neurologic disorder antedates the onset of diabetes, usually by a period of many years.

Various pathogenic hypotheses for this disease combination are considered. Hereditary predisposition and neurogenic diabetes are thought to be the more likely hypotheses. They are discussed as to their relative merits and their correlation with clinicopathologic and experimental data. It is felt that these cases serve as a warning against hasty acceptance of the pathogenic concept for diabetes mellitus which is based on the "diabetogenic" action of the hypophysis.

This investigation seems to indicate that the extent of involvement of the central nervous system in Friedreich's

ataxia is considerably greater than ordinarily considered. The importance of making complete neuropathologic examinations in this neurologic disorder is emphasized.

Since Friedreich's ataxia constitutes a clinicopathologic entity while in diabetes mellitus a definitive pathology as yet has not been discovered, it would appear that a careful study of cases such as the ones described herein may aid in elucidating the pathogenesis of diabetes mellitus.

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### IS THIS SELFISHNESS?

"I am not an oldster, but I recall the days of Lydia Pinkham, electric belts, the traveling advertising quack, and the Indian medicine show. I recall the time when the existence of most medical journals depended on the advertising of worthless proprietary preparations and apparatus. I remember the slander suits brought against the officers of the Association because of its campaign against quackery and dishonest advertising, and the alarm felt a quarter of a century ago because of the plague of cult practitioners seeking a short cut to care for the sick. In defense of scientific medicine, we were then, as now, accused of being a high-handed monopoly. I recall the efforts required to develop

and perfect our public health service and our laws relating to license for the practice of medicine. There was determined opposition at every turn.

"Is all this the story of a group indifferent to human need? Is this a story of selfishness? Were these benefits for the physician? Or has there been enacted the drama of an idealistic profession fighting to wipe out the diseases which furnish it a livelihood, battling to protect its people against fraud and striving at all times to defend the advancement of science, and honesty in its application?"—*Rock Sleyster, M.D., President of the A. M. A., addressing the New Hampshire Medical Society*

### TO CURE EVERYBODY BY LOTTERY

A constitutional amendment authorizing a state lottery to finance a long-range health program and provide for the free distribution of medicines was proposed in the legislature at Albany on January 17. The proposal was

dropped into the assembly bill hopper by Assemblyman Aaron Goldstein, Brooklyn democrat.

Along with this proposal Goldstein reintroduced his bill that was killed in the 1939 session to set up a system of free medicine.

# MECHANICAL OBSTRUCTIONS OF THE SMALL INTESTINE

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SINCE obstructions of the small intestine can occur in so many ways and under such a variety of circumstances, it is obviously necessary to specify the types which are to be considered. The present discussion, based in part upon a review of 328 cases, is limited to obstructions of the small intestine produced by conditions that mechanically interfere with the passage of its contents. Complete and incomplete simple obstructions and those associated with strangulation are included. Obstructions primarily caused by paralytic conditions, mesenteric thrombosis, and regional enteritis are omitted. By such restriction it is believed that confusion will be avoided.

## Etiology

The causes of simple mechanical obstruction may, for convenience, be divided into conditions that act within the lumen of the bowel and those that obstruct from without.

Obstructions from within the bowel are relatively few. Occasionally a large gallstone finds its way into the duodenum by erosion and lodges in the small intestine. Fruit skins, bran, and other bulky substances occasionally become impacted in the terminal ileum<sup>1,2</sup> or the lumen may be occluded at any point by a primary tumor.

Mechanical obstructions due to conditions outside the intestinal lumen are far more common. They are most frequently caused by adhesions resulting from an operation or an inflammatory process. Such adhesions produce obstruction by sharply angulating the bowel, by constricting it, or by forming a loop through which a coil of intestine passes and becomes engaged.

Obstruction due to angulation or con-

striction is the simplest type and produces anatomic and physiologic changes of the least immediate gravity. The first result of such an obstruction is an arrest of intestinal contents with gradual distention of the bowel.

## Pathologic Anatomy and Physiology

*Local*—If a simple obstruction is not relieved, changes of a serious nature set in. There is a gradual accumulation of fecal matter, fluid, and gas proximal to the obstruction. Because of internal pressure the intestinal wall becomes stretched and thin, and the small collapsible veins and capillaries are compressed. There is a transudation of fluid elements from the blood vessels into the bowel wall, into the lumen of the bowel, and into the peritoneal cavity. The results are an edema and increased friability of the wall, an increase in the intraluminal fluid, and an accumulation of free fluid in the peritoneal cavity. Bacteria within the lumen multiply rapidly and toxic agents are elaborated. Distention gradually progresses until the nutrition of the intestinal wall is compromised, bacteria may pass through into the peritoneal cavity without actual perforation, or direct contamination may occur through gangrenous openings.

If an obstruction is complicated by strangulation, the changes described above go on much more rapidly in the strangulated loop than in the intestine proximal to it. The proximal segment of intestine is merely obstructed and its blood supply is not immediately compromised. The strangulated segment, on the other hand, suffers an immediate restriction of its circulation. Interference with the venous return leads to extensive interstitial hemorrhages (Fig. 1), and degenerative changes tend to occur

much earlier than in simple obstruction.

Among the first physiologic effects of obstruction are intermittent, painful intestinal contractions soon followed by vomiting. The intestinal contents below the obstruction are likely to be evacuated per rectum and after this no further passage of feces occurs. When the obstruction is complete gas does not escape. If the obstruction is not relieved, pain will continue as long as there is sufficient intestinal tone to produce peristalsis, and vomiting usually persists until the patient succumbs.

*General*—The general manifestations of simple obstruction are related chiefly to the effects of dehydration and intoxication. In strangulation the extravasation of blood into the bowel may be a matter of importance if the segment is long.<sup>3</sup>

Under normal conditions the secretions of the stomach and upper intestinal tract, gastric, pancreatic and enteric juices, and bile range from 2,000 cc to 10,000 cc per day.<sup>4,5</sup> The greater part of this total, consisting chiefly of water and inorganic salts, is normally reabsorbed from the lower small intestine and colon and again takes part in the metabolic processes of the body. However, if an obstruction exists, the fluid which would ordinarily be reabsorbed is vomited and so lost to the body economy. Depletion proceeds at a rapid rate and the condition is further aggravated by inability of the patient to retain water or other fluids taken by mouth. The unchecked loss of water eventually leads to interference with urine excretion, with heat regulation, with the maintenance of normal blood volume, and with virtually all metabolic processes of the body.

The toxemia encountered in obstruction is associated more closely with strangulation than with simple obstruction. From the experimental work of numerous investigators it has been established that toxic materials are elaborated in a strangulated loop of intestine. The nature of the toxic agents and the mode of their absorption are not definitely known.

Substances which have been considered responsible<sup>6-14</sup> are the various ptomaines, proteose, heteroproteose, toxic amines, and more recently, potassium Histamine has been demonstrated in the transudate from strangulated loops<sup>15, 16</sup> but not in amounts sufficient to produce directly the profound depressor effects commonly observed in strangulation. The suggestion has been made that histamine and other poisons of acute obstruction give rise to harmful effects in an indirect manner.<sup>17</sup> Their stimulating action on gastric secretions has been demonstrated<sup>18, 19</sup> and any increase in the output of gastrointestinal secretions would necessarily lead to a greater loss of body fluids and electrolytes through vomiting.

Whatever the substance or substances may be, they have a depressor effect generally comparable to that of histamine and produce a shocklike state. Their activity is most strikingly demonstrated after the release of a long strangulated loop. The rather sudden return of circulation washes the accumulated toxic materials into the general circulation with depressing effects.<sup>20</sup> In obstruction with longstanding strangulation, three factors are at work, dehydration, toxic substances, and hemorrhage, all of which tend to reduce the volume of blood in circulation and thereby produce a state which is comparable to secondary surgical shock.

### Symptoms and Signs

The symptoms of obstruction—cramp-like abdominal pain, nausea, vomiting, and inability to pass feces or gas, are too well known to warrant extended discussion.

The signs of obstruction—distention with tympany, visible peristalsis, borborygmus which is synchronous with intestinal cramps, vomiting, and later the signs of dehydration and shock—are likewise well known and when present the diagnosis ordinarily offers no great difficulty. The laboratory findings often fail to help and may be confusing. A roentgenogram of the abdomen, however,



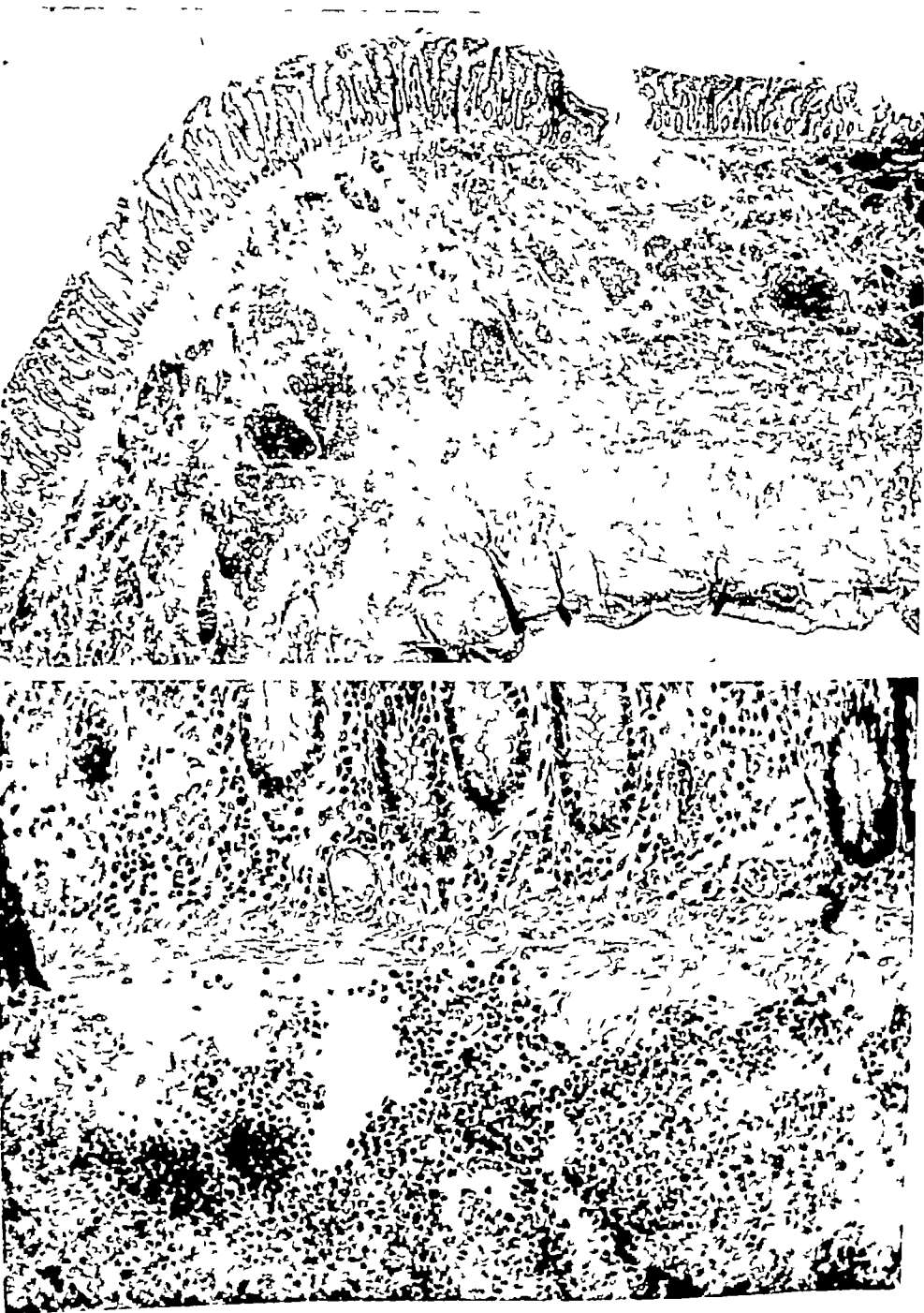


FIG 1 Low and high power photomicrographs showing extravasation of blood in strangulated intestine.

is often a valuable aid<sup>21</sup> since it reveals the distribution of distended coils of intestine and frequently indicates the approximate location of the obstruction. It is particularly valuable in demonstrating whether the obstruction is in the large or the small bowel.<sup>22</sup> Distention of the colon with gas indicates that the lesion is in the colon, whereas a collapsed colon with distended loops of small intestine indicates an obstruction above the level of the ileocecal valve. Differentiation between lesions of the large and small intestines is a matter of considerable importance in planning treatment.

### Differential Diagnosis

If the classic symptoms and signs of obstruction are present and there is an abdominal scar or an irreducible hernia, the diagnosis is relatively easy. Diagnostic errors in the presence of typical symptoms, however, are occasionally made, such errors are usually due to co-existing disorders which mask or confuse the picture, or to an inexplicable lapse of human judgment. There are, however, certain conditions under which the diagnosis or exclusion of obstruction may be difficult.

A common circumstance in which diagnosis may be troublesome is in the persistence of distention and vomiting after an abdominal operation. A continuation of these symptoms beyond the usual period suggests the possibility of peritonitis, obstruction, a functional disturbance, or a combination of such conditions. In the case of peritonitis such basic signs as temperature, pulse, respirations, and leukocyte count tend toward a higher level than in simple obstruction. Temperature and leukocyte count are often high in strangulated obstructions,<sup>23</sup> but early postoperative obstructions are not often associated with strangulation.<sup>24</sup> The pain in peritonitis shows less tendency to be cramplike and is not so regularly associated with borborygmus. The obstipation in peritonitis is not complete and enemas will ordinarily yield some feces and gas. In diffuse peritonitis an x-ray examination of the abdomen shows

a more or less uniform distention of the whole intestine including the colon. In obstruction, the intestine distal to the point of occlusion is collapsed.

Lesions or operations affecting the kidney or ureter sometimes give rise to abdominal pain and distention of marked severity and duration. Other conditions which may present confusing symptoms are acute hemorrhagic pancreatitis, gallstone colic, lead colic, tabetic crisis, perforated peptic ulcer, acute appendicitis, allergic conditions affecting the intestinal tract, and diaphragmatic pleurisy. A discussion of the differentiation of all these conditions obviously cannot be undertaken.

### Treatment

The ideal treatment of intestinal obstruction is surgical removal of the cause provided the condition of the patient and his surroundings permit such an undertaking. Poor condition of the patient or lack of proper equipment and personnel may force delay. Under such circumstances restorative measures should be applied until operation becomes possible.

### Nonsurgical Treatment

#### 1 Parenteral fluids

2 Gastrointestinal drainage by duodenal tube.

#### 3 Enemas

*Parenteral Fluids*—The fluid to be employed intravenously or by hypodermoclysis is *physiologic* salt solution in large amounts. For the average adult not less than 2,000 cc. of normal saline should be given intravenously at the outset, and this should be supplemented until the total amount given in twenty-four hours is not less than 50 cc per kilogram of body weight, ordinarily about 3,500 cc. The quantity suggested will not do more than fulfil normal water requirements<sup>25</sup> and should be regarded as the basic dose. In obstruction of several hours' duration there is an important depletion of body fluids, mainly through vomiting, and to compensate for this loss an equivalent amount of salt solution should be added to the basic dose.

In prolonged vomiting, especially in high obstruction, there is a loss of sodium base and chloride in addition to the loss of water. Investigations<sup>26-31</sup> have shown that sodium and chloride ions, particularly the sodium ions, are intimately concerned in the ability of the body to retain water and, by corollary, a normal blood volume. The beneficial effects of the administration of large amounts of sodium chloride solution in intestinal obstruction were reported in 1912<sup>32</sup> and have been confirmed in subsequent studies<sup>33-36</sup>. A physiologically normal solution should be used. Higher concentrations tend to extract water from tissues which are already depleted, and the temporary hydermia may lead to an actual loss of water through kidney excretion. The same may be said of hypertonic glucose. In isotonic solution, 5 per cent, glucose is valuable, partly on account of its own nutritive value but mainly because it aids in the metabolism of body fat. The average tolerance for glucose given intravenously is said to be 0.85 Gm per kilogram of body weight per hour.<sup>37</sup>

The transfusion of blood is indicated in simple obstruction of long duration and in strangulation. In simple obstruction blood plasma is lost by transudation, and in strangulation there is sometimes a considerable loss of red cells as well as plasma.

*Gastrointestinal Drainage*—Drainage of the regurgitated fluid which collects in the stomach and upper intestinal tract is made relatively easy by means of the gastric catheter,<sup>33</sup> introduced preferably by way of the nostril. The beneficial effects are due to relief of distention with improvement of intestinal circulation, to the rest which it affords the patient, and possibly to the removal of some toxic agent contained in the regurgitated intestinal fluid.<sup>39, 14</sup>

Drainage through the tube may be accomplished by intermittent aspiration and lavage or by continuous suction.<sup>40</sup> In either case it is important to attend to replacement of fluid and electrolytes by the parenteral administration of normal saline.<sup>41</sup>

The Miller-Abbott tube is an admirable device for gastrointestinal drainage.<sup>42-44</sup> With this tube it is often possible to drain completely and continuously the segment of intestine lying proximal to the point of obstruction and immediate operation is made unnecessary. It often requires considerable patience and skill to secure passage of the tube beyond the pylorus, and when efforts are not successful within a reasonable time operation should be undertaken without further delay.

*Enemas*—In the attempt to relieve obstruction by nonsurgical means the enema has been resorted to more consistently than any other procedure. In mechanical obstruction, however, it is doubtful whether the enema has any real value beyond helping to establish the diagnosis. It is not likely that it can do more than empty the bowel below the site of obstruction and stimulate peristalsis. Peristalsis is usually active without artificial stimulation and excessive motility may constitute a danger. Protracted attempts to relieve obstruction by means of enemas have undoubtedly contributed materially to the high mortality in this disease.

### Surgical Treatment

The effective relief of obstruction depends ultimately upon a direct removal of the cause. Conditions being favorable, operation should be undertaken at the earliest possible moment. If, however, the patient gives evidence of marked dehydration and is in a shocklike state, he should have a period of gastrointestinal drainage and fluid replacement before operation is undertaken.

*Incision*—If there is no definite indication as to the location of obstruction, a right rectus incision made near the midline will frequently prove satisfactory. The majority of obstructions of the small intestine are in the distal portion of the ileum.

*Procedure*—An immediate inspection of the ileocecal region will often lead to discovery of the obstruction. If collapsed, the terminal ileum sometimes can be followed retrogradely to the obstruct-

ing lesion. Adhesions frequently make this approach impracticable and it becomes necessary to seek the point of obstruction by following the distended intestine from above downward. The obstructing mechanism is usually single, and the division of adhesions which have no part in the obstruction is useless and may well lead to disastrous perforations of the friable gut.

*Viability of Strangulated Loop*—When strangulation complicates obstruction the best indications of viability of the strangulated loop are preservation of the glistening appearance of the serous surface, definite improvement in color upon release, return of lifelike consistency as contrasted with the flaccidity of necrotic gut, and peristalsis or other evidence of contractility when warm salt solution is applied. If there is doubt, it is, perhaps, safer to resect the strangulated loop.<sup>45</sup> When the loop is definitely gangrenous, the necrotic portion is resected with a good margin and continuity is restored by anastomosis. In desperate cases the loop may be exteriorized with an enterostomy tube placed in its proximal limb.

## Enterostomy

1 *As a Primary Procedure*—For several years the impression has been widespread that the safest operation in acute obstruction is an enterostomy, with little or no attempt to determine the cause of obstruction. If by chance a strangulation is present, the result of simple enterostomy will be almost inevitably fatal. An enterostomy performed above the level of a strangulation does little to relieve the strangulated loop which goes on to gangrene and perforation. An enterostomy may be done in such a case without discovering that strangulation exists (Fig. 2). The distended bowel above the site of strangulation presents all the characteristics of a simple obstruction. Strangulation should always be suspected if there is bloody fluid in the peritoneal cavity.

The safety of simple enterostomy as a surgical measure has also been wrongly emphasized. Local or general peritonitis,

wound infection, failure to relieve obstruction, and digestion of the abdominal wall are not at all uncommon complications of this procedure. If the enterostomy is placed high, in the upper jejunum for example, there is often leakage about the tube with digestion of the surrounding abdominal wall. The opening becomes progressively larger and quantities of water and chemical substances essential to survival of the patient are lost. These can be restored only in part by artificial means and unless the loss can be checked a fatal outcome is likely. The deleterious effects of high intestinal fistulas have been amply demonstrated experimentally<sup>46-50</sup> and are well known clinically.

2 *As a Secondary Procedure*—After the cause of a simple obstruction has been found and the condition rectified, nothing more, as a rule, should be done. There is no logical reason why the addition of an enterostomy should improve matters. When released from the obstructing mechanism the bowel can evacuate its contents into the segment lying distal to the point of occlusion quite as readily as through an enterostomy tube, and there is no evidence that toxic contents are absorbed from normal mucosa.<sup>51-52-53</sup> From statistical studies it appears that enterostomy after the obstruction has been relieved not only is useless but actually increases the mortality.<sup>53-56-54</sup>

## Postoperative Complications

In the simple cases of short duration the postoperative complications are likely to be few and of a kind that might follow any operation. If the obstruction has been of long duration additional dangers present themselves.

1 Because of the great loss of fluid and toxemia, particularly if there has been strangulation, the patient may pass into a shocklike state and succumb even though relief of the obstruction has been perfectly executed.

2 Another grave complication is peritonitis which may develop with or without intestinal necrosis, or from injury to the intestine during operation.

3 In cases with marked obesity, multiple adhesions, great distention, or other surgical handicaps there is the possibility of failure to identify the cause of obstruction. A hidden band or a strangulated loop may have been overlooked.

4 Occasionally, when the bowel has been distended or strangulated for a long time there is a delay in recovery of tone, and paralytic ileus may supersede a mechanical ileus.

5 Complications such as heart failure and urinary suppression are most often due to no basic fault of the organs concerned but are manifestations of a lack of sufficient fluid to provide blood volume and urinary output.

### Postoperative Treatment

1 First of all the patient's stomach should be emptied immediately after operation to prevent the aspiration of vomitus during the period of unconsciousness.

2 Gastroduodenal drainage should be continued until it is evident from the character of the fluid obtained, from the disappearance of distention, and from the evacuation per rectum of feces or gas that normal intestinal activity has returned.

3 Continuation of intravenous saline therapy is most important. Fluid should be given in amounts sufficient to maintain a water balance with enough glucose added to prevent ketosis. There need be no immediate anxiety concerning food.

4 Repeated enemas and drugs intended to promote peristalsis are usually uncalled for. As a rule the decompressed intestine quickly recovers tone and regains its normal motility. Until the intestine is capable of response, purgatives can do no good and they may be harmful. The effects of morphine on the small intestine are not completely established<sup>57,58</sup> but there appears to be no definite contraindication to its use for relief of pain.

5 Fluid by mouth should be restricted to water until it becomes evident that nourishing fluids will be tolerated.

6 Treatment of organic postoperative

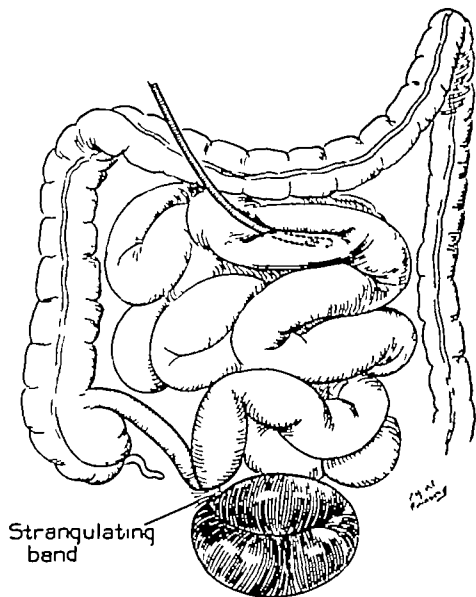


FIG 2 Sketch indicating the futility of enterostomy above an undiscovered strangulation. An opening in the obstructed proximal intestine does not relieve the strangulated loop.

complications will be indicated by the nature of the disorder. It should be remembered that the majority of cardiac and urinary disturbances are the result of fluid deficiency, and stimulating drugs are not indicated.

### Mortality

In the present study special attention was given to mortality in relation to type and cause of obstruction. There was also an attempt to correlate mortality with the operative procedure. The kind of obstruction, the type of operation, and the associated mortality are indicated in the tables.

The total number of deaths in the 328 cases of partial and complete obstruction was 80, or 24.4 per cent. The number of cases of complete simple obstruction was 108, with 37 deaths, a mortality of 34 per cent (Table 1). Complete obstruction associated with strangulation was present in 106 cases, with 34 deaths, a mortality of 32 per cent (Table 2). The incomplete or partial obstructions numbered 114, with 9 deaths, a mortality of 8 per cent (Table 3).

The mortality associated with the various operative procedures is also shown in the tables. It will be observed in general that release of the obstruction by the simplest means gave the lowest mortality. In the 214 complete obstructions, simple and strangulated (Tables 1 and 2), the general mortality was 33.2 per cent, this includes those who had only an exploration and those who died without operation. In 150 cases of the two groups the cause of obstruction was surgically removed *without the addition of enterostomy*, the mortality in this series was 19, or 12.7 per cent. In 26 cases of the same groups the cause of obstruction was surgically removed *with the addition of enterostomy*, the mortality following the double procedure was 16, or 61.5 per cent. The causes of death following enterostomy were peritonitis or wound infection, 10 cases, secondary shock, 3 cases, cardiac failure (auricular fibrillation), 1 case, death on the operating table, 1 case, obstruction not relieved, 1 case.

It may be taken for granted that the 26 cases subjected to enterostomy were regarded as the more serious ones but the reason for enterostomy was not often clear. Presumably it was considered a safety measure.

Enterostomy alone in 15 cases of complete simple obstruction showed a mortality of 53 per cent. In 5 cases of complete obstruction due to strangulation enterostomy alone yielded a mortality of 100 per cent.

### Causes of Death

A review of the 80 deaths occurring in the entire series revealed the following causes:

Metastatic carcinoma 15 cases. Although not all obstructions and not all deaths in this group were directly due to carcinoma, it seems fair to group them together.

General peritonitis 13 cases. In 8 of these enterostomy had been performed either alone or as a part of the procedure, in 1 case a resection had been done, in 1 case there had been an accidental rup-

TABLE 1—COMPLETE SIMPLE OBSTRUCTION

Causes of Obstruction	No of Cases		Operative Relief of Obstruction		Operative Relief and Enterostomy		Operative Relief with Resection		Operative Relief with Enterostomy		Enterostomy Only		Enterostomy and enterostomy		Excised or Manipulated Into Cecum		Exploration Only		No Operation		
	No	%	No	D	%	No	D	%	No	D	%	No	D	%	No	D	%	No	D	%	
Old postoperative adhesions	01	12	20	44	4	9	8	4	50	1	0	0	1	1	100	5	2	40	1	0	0
Recent postoperative adhesions	18	12	65	7	3	43	5	4	80	1	1	100	2	2	100	2	1	50			
Adhesions without history of operation	0	2	33	5	1	20							1	1	100						
Adhesions to inflammatory mass	4	2	50	1	0	0	1	1	100				1	0	0						
Abdominal carcinoma	11	6	55	4	2	50				1	0		2	1	50	3	2	66	1	1	100
Abdominal tuberculosis	1	0	0	1	0	0															
Foreign body	2	0	0													2	0	0			
Concealed atresia	1	1	100															1	1	100	
Cause undetermined	4	2	50										4	2	50						
Total	108	37	34	62	10	16	14	9	64	2	0	0	2	2	100	15	8	53	6	3	50
																2	0	0	2	2	100
					</																

Code No = Number of cases  
D = Died in hospital  
% = Mortality per cent (approximate)



ture of the intestine, and in 3 there had been no operation, or merely an exploration

Persistence of obstruction 12 cases  
In 5 of these enterostomy had been performed above the site of a strangulation, in another case ineffective lysis of adhesions had been done, in 1 of simple obstruction enterostomy was done, in 4 no operation or merely an exploration had been done. The futility of simple enterostomy in the presence of strangulation has been indicated (Fig 2 and Table 2)

Intoxication, dehydration, or shock 10 cases

Cardiac decompensation 7 cases

Local peritonitis or wound infection 6 cases. In 2 of these enterostomy alone had been performed and in the remaining 4 it was a part of the procedure

Pneumonia 3 cases

Pulmonary embolus 1 case

Inhalation of vomitus while still under anesthesia 1 case

Death on table from spinal anesthesia 1 case

Death on table from shock 1 case

Paralytic ileus following release of mechanical obstruction 1 case.

Suppression of urine 1 case.

Cause of death not definitely determined 8 cases

### General Prognosis

The prognosis is largely an individual matter and depends much upon the duration and nature of the obstruction. It depends no less upon rational therapy. Liberal use of parenteral fluids and gastrointestinal drainage will increase the salvage of life in late cases.

The age of the patient is also a matter of importance. The mortality is generally higher in the first years of life and in the years past middle life.<sup>59,60</sup> Survival, however, depends less upon age than upon conditions more intimately associated with the obstruction. Rational treatment should never be withheld because the patient happens to be old.

The prognosis with respect to future attacks can hardly be estimated. In this series, however, 67 per cent of the patients had had one or more previous operations for obstruction. It appears, therefore, that the probability of obstruction is much greater in those who have had previous attacks.

### Summary

In this series the most common etiological factor in the production of simple mechanical obstruction, both complete and incomplete, was old postoperative adhesions. They accounted for 56 per cent of the complete obstructions and 49 per cent of the incomplete obstructions. The factor of next greatest importance in simple obstruction was the formation of adhesions during the course of convalescence from another operation. Eighteen, or 17 per cent, of the complete simple obstructions and 15, or 13 per cent, of the incomplete obstructions were caused in this way.

Adhesions without a history of previous operation were responsible for partial or complete simple obstruction in only 8 of 214 cases, 3.7 per cent.

In the complete obstructions with strangulation, old postoperative adhesions were responsible for 14 of 106 cases, or 13 per cent. There was no case of strangulation from recent postoperative adhesions. The majority of the strangulated obstructions, 63 per cent, were caused by hernias.

### Conclusions

The treatment of intestinal obstruction consists primarily in operative attack upon the obstructing lesion. Gastrointestinal drainage by means of a suitable catheter and the parenteral administration of large amounts of fluid are valuable preoperative and postoperative adjuncts.

Enterostomy after an obstruction has been relieved is uncalled for and actually appears to increase the mortality. Its use should be reserved for those cases in which the condition of the patient does not permit a more extended procedure.



TABLE 2—COMPLETE OBSTRUCTION WITH STRANGULATION

Causes of Strangulation	No of Cases		Operative Relief of Strangulation		Operative Relief and Enterostomy		Operative Relief with Resection		Operative Relief with Enterostomy		Enterostomy Only		Exterionza		Exploration Only		No Operation				
	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %			
Old postoperative ad lesions	14	3	21	5	0	0	2	1	50	5	0	0	1	1	100			1	1	100	
Adherent appendix	1	0	0	1	0	0	1	0	0	4	1	100									
Intussusception	14	5	36	8	0	0	4	1	100	2	1	50	1	1	100	1	1	100			
Volvulus	20	8	28	21	4	10	1	1	100	6	3	50	1	0	0						
Femoral hernia	29	8	28	21	4	10	1	1	100	1	1	100	1	1	100			1	1	100	
Inguinal hernia	21	6	29	17	2	12	1	1	100	1	1	100	1	1	100						
Umbilical or ventral hernia	15	0	40	10	4	40	2	0	0	1	0	0	2	2	100						
Internal hernia	2	0	0	2	0	0															
Total	100	34	32	08	11	16	7	3	43	17	8	47	3	2	67	1	1	100	2	2	100

Code No = Number of cases  
 D = Died in hospital  
 % = Mortality per cent (approximate)

TABLE 3—INCOMPLETE OR PARTIAL OBSTRUCTION

Causes of Obstruction	No of Cases		Operative Relief of Obstruction		Operative Relief and Enterostomy		Operative Relief with Resection		Enterostomy Only		Exterionza		Excision		No Operation	
	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %	No	D %
Old postoperative adhesions	50	1	2	20	1	4	1	0	0	1	0	0	1	0	0	0
Recent postoperative ad lesions	15	2	13	8	1	13	1	0	0	1	0	0	2	0	0	0
Adhesions without history of operation	2	0	0				1	0	0						1	0
Adhesions to inflammatory mass or benign tumor	7	1	14	5	0	0	1	1	100							
Primary small intestinal tumor	3	1	33													
Abdominal carcinoma or sarcoma	11	4	36	1	1	100	1	0	0				1	0	0	100
Abdominal tuberculois	5	0	0	3	0	0	2	1	50	4	1	25	1	0	0	100
Meckel's diverticulum	1	0	0												2	0
Congenital stenosis	1	0	0										1	0	0	0
Intussusception	1	0	0	1	0	0										
Incarcerated femoral hernia	1	0	0	0	0	0									1	0
Incarcerated inguinal hernia	6	0	0	5	0	0										
Incarcerated umbilical or ventral hernia	2	0	0	2	0	0										
Incarcerated internal hernia	2	0	0	1	0	0									1	0
Cause not determined	2	0	0												39	2
Total	114	9	8	53	3	6	2	1	50	5	1	20	7	1	14	5

Code No = Number of cases  
 D = Died in hospital  
 % = Mortality per cent (approximate)

ture of the intestine, and in 3 there had been no operation, or merely an exploration

Persistence of obstruction 12 cases  
In 5 of these enterostomy had been performed above the site of a strangulation, in another case ineffective lysis of adhesions had been done, in 1 of simple obstruction enterostomy was done, in 4 no operation or merely an exploration had been done. The futility of simple enterostomy in the presence of strangulation has been indicated (Fig 2 and Table 2)

Intoxication, dehydration, or shock 10 cases

Cardiac decompensation 7 cases

Local peritonitis or wound infection 6 cases  
In 2 of these enterostomy alone had been performed and in the remaining 4 it was a part of the procedure

Pneumonia 3 cases

Pulmonary embolus 1 case

Inhalation of vomitus while still under anesthesia 1 case.

Death on table from spinal anesthesia 1 case

Death on table from shock 1 case

Paralytic ileus following release of mechanical obstruction 1 case.

Suppression of urine 1 case.

Cause of death not definitely determined 8 cases

### General Prognosis

The prognosis is largely an individual matter and depends much upon the duration and nature of the obstruction. It depends no less upon rational therapy. Liberal use of parenteral fluids and gastrointestinal drainage will increase the salvage of life in late cases.

The age of the patient is also a matter of importance. The mortality is generally higher in the first years of life and in the years past middle life.<sup>59,60</sup> Survival, however, depends less upon age than upon conditions more intimately associated with the obstruction. Rational treatment should never be withheld because the patient happens to be old.

The prognosis with respect to future attacks can hardly be estimated. In this series, however, 67 per cent of the patients had had one or more previous operations for obstruction. It appears, therefore, that the probability of obstruction is much greater in those who have had previous attacks.

### Summary

In this series the most common etiologic factor in the production of simple mechanical obstruction, both complete and incomplete, was old postoperative adhesions. They accounted for 56 per cent of the complete obstructions and 49 per cent of the incomplete obstructions. The factor of next greatest importance in simple obstruction was the formation of adhesions during the course of convalescence from another operation. Eighteen, or 17 per cent, of the complete simple obstructions and 15, or 13 per cent, of the incomplete obstructions were caused in this way.

Adhesions without a history of previous operation were responsible for partial or complete simple obstruction in only 8 of 214 cases, 3.7 per cent.

In the complete obstructions with strangulation, old postoperative adhesions were responsible for 14 of 106 cases, or 13 per cent. There was no case of strangulation from recent postoperative adhesions. The majority of the strangulated obstructions, 63 per cent, were caused by hernias.

### Conclusions

The treatment of intestinal obstruction consists primarily in operative attack upon the obstructing lesion. Gastrointestinal drainage by means of a suitable catheter and the parenteral administration of large amounts of fluid are valuable preoperative and postoperative adjuncts.

Enterostomy after an obstruction has been relieved is uncalled for and actually appears to increase the mortality. Its use should be reserved for those cases in which the condition of the patient does not permit a more extended procedure.

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## MYSTERY OF THE VACANT CHAIRS

"I cannot understand why so few men attend their county and state medical society meetings. It is not because they are so busy, as the busiest physicians are always found where there is a chance to learn. After years of observation I have reached the conclusion that there are three kinds of physicians who don't attend meetings—(1) the person who has not the ability to plan his work so that he can have an evening for recreation at the meeting, (2) the man who thinks he knows it all, has not read a new book since leaving school, and has no time for reading the *Journal* or other publications, and (3) the man who is afraid he might lose a patient should he

leave his office. These three types form the fault-finding group, they complain, but will not come to the meetings and put their shoulders to the wheel, clarify their visions, help remove the faults they see, and become what is most needed by the society and always welcomed by its officers—workers instead of drones or complainers.

'Yes, the opportunity for the present day physician to be an up to date physician is right at his door, and I am not only sorry for those who are missing these opportunities, but for their patients.'—John A. Hawkins M.D., *Pittsburgh Medical Bulletin*

Four outbreaks of food poisoning have been traced to one bakery in Troy, New York, in the past four years, according to the State Department of Health, all due to chocolate eclairs, straw-

berry cream pie, and coconut cream pie. The latest was in November. Newspaper and radio warnings against eating cream filled pastries made by this bakery have been issued.

# TRAUMA IN RELATION TO PULMONARY TUBERCULOSIS

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OUR present concept of the evolution of pulmonary tuberculosis holds that we are dealing with a disease that commences with a primary infection stage, occurring in most instances in the lungs although it may arise in the intestines, skin, tonsils, or elsewhere in the body, enters a second stage of generalization through the blood stream, and finally a tertiary stage of localization in the lungs, or phthisis

Once the infection occurs within the body its future course is subject to many variations. It may heal completely, remain latent and dormant for years, spread slowly and progressively or rapidly and in fulminating fashion, or have longer or shorter periods of arrest of the process followed by exacerbations of renewed activity, pursuing in this manner a period extending from a few weeks to many years before terminating in the death of the patient

The factors of inherited resistance, allergy, and immunity all exert a determining influence on this course of the disease, but they, too, are variable factors, being at one time at a high level of protective efficiency and later at a very low level or wholly unprotective. At present these factors are imponderables, we cannot measure their protective value or, with allergy, their potentially destructive value

However, we feel that there are certain known conditions that influence these states for better or worse, thereby determining the course that the disease will follow. Among these conditions may be mentioned the race, sex, and age of the patient, his social and economic status, lack of rest and fatigue, enfeeblement of the body from exposure or sickness, excessive physical or mental strain,

and trauma. No one of these conditions is the cause of pulmonary tuberculosis, but through disturbing the bodily defenses they exert an influence to reactivate an existing lesion. So, as a foundation for our consideration of the subject of trauma in relation to pulmonary tuberculosis we must predicate that trauma cannot cause tuberculosis. Tubercle bacillus infection of the lung must be present to cause the disease. Trauma, along with other factors, may then influence the course that the disease follows.

Active pulmonary tuberculosis arising directly from a primary tuberculous infection induced by trauma is extremely rare. The Jewish ritual of circumcision performed by a tuberculous rabbi would be an illustration of such a possibility, and such cases have been reported. However, this is followed by generalized miliary tuberculosis, not pulmonary tuberculosis per se. It is conceivable that a sharp instrument, contaminated with tubercle bacilli, penetrating the chest wall and perforating the lung might cause a primary infection of the lung. Such an occurrence would be most exceptional.

Our interest, therefore, is restricted to the potentiality of active tuberculous disease resulting from trauma-affecting foci existing in the lungs at the time of traumatization.

It is generally felt more difficult to judge the role of trauma in pulmonary tuberculosis than in tuberculous involvement of any other system of the body, and the literature abounds with contradictory statements and opinions of experts in this work. We must appreciate that the expert's opinion is often only presumptive, based on his experience and judgment, and sometimes merely

possible in the individual case Schu-lerth<sup>1</sup> states "In speaking of the course and aggravation of any case of pulmonary tuberculosis, outside influences should never be held responsible, but the force of the existing disease itself must be considered. One can hardly fix the blame on any one factor."

Sante<sup>2</sup> states "Surely we must admit that trauma certainly does not play more than a very minor part in the development of pulmonary tuberculosis. Trauma, alone, as an etiologic factor in its development is highly speculative, though it is logical to suppose that trauma severe enough to cause actual injury to the lung might disturb the bodily defenses against a pre-existing tuberculous lesion by removing the fibrous tissue barrier and permitting advancement of the disease."

Amberson<sup>3</sup> states "Knowing as we do that the course of pulmonary tuberculosis is subject to many deviations, it often becomes an exacting task to distinguish the developments which are due to trauma from those which merely follow trauma. In some instances the question is a matter of judgment, which varies with the experience and conceptions of the clinician, but in a majority of cases it is possible to obtain objective evidence which is of definite and decisive value."

Howes<sup>4</sup> states "The causes of relapse in pulmonary tuberculosis are numerous including the effects of accidents and injuries."

Krause<sup>5</sup> says "It is generally conceded that trauma sets up active pulmonary and regional lymph-node tuberculosis as well as pleuritis and several other major diseases, whose causation is primarily conditioned by the presence in the lungs of tuberculous foci, active and appreciated or inactive and unsuspected, at the time of trauma. This is the common and ordinary way that pulmonary tuberculosis is affected by trauma. It presupposes that tubercle of the lungs exists before and at the time of traumatization, and that if it has never before been clinically manifest or active,

trauma induces activity, or that if mildly active, its existence may not have been suspected by patient or physician until some trauma brings active tuberculosis plainly to the foreground, or that if active in the past, the disease is in a state of clinical arrest at the time of trauma which again reactivates it."

Granting the difficulty of passing judgment on the effect of trauma in the individual case, I cannot but feel its causal relationship in many cases of tuberculous reactivation or extension. Our aim must be to try to estimate this relationship in terms of known fact and not theoretic hypothesis.

The potentialities of trauma may be direct or indirect. That is to say, we may have an injury to the chest wall followed immediately or after a varying interval of time by pulmonary tuberculosis, or we may have an injury to some other part of the body, not involving the chest, followed by prolonged debilitating illness lowering the patient's resistance and reactivating a quiescent or undetected tuberculous focus into clinically active disease abruptly or gradually. The abrupt manifestation of tuberculosis following trauma is heralded by hemoptysis or spontaneous pneumothorax due to the mechanical effect of the trauma. Unquestionably, the majority of cases of pulmonary tuberculosis develop activity despite any trauma, and most hemoptyses and spontaneous pneumothoraces occur when the patient is relatively quiet. When these developments occur shortly following trauma, one can scarcely dispute the causal relationship, especially when manifest tuberculosis is found within the lungs and with our knowledge of how soft and friable such diseased tissue is compared with healthy lung tissue.

Greater difficulty is encountered when the onset following trauma is more gradual and ushered in with constitutional symptoms, i.e., malaise, fatigue, fever, loss of weight, etc.

Trauma as it affects the lungs may result from (1) penetrating wounds of the thorax, (2) blows on the chest or

crushing or squeezing injuries, (3) fractures of the bony thoracic cage, (4) sudden changes of atmospheric pressure or weather, (5) inhalation or aspiration of foreign matter

Penetrating wounds of the chest are rarely followed by pulmonary tuberculosis Frischliuer<sup>6</sup> studied 6,000 tuberculous soldiers among whom there was only 0.77 per cent reactivation of the tuberculosis by gunshot wounds of the chest. Letzerer<sup>6</sup> believes the reactivation depends upon whether the bullet penetrates the tuberculous focus or not, obviously a chance occurrence

The most common type of trauma inducing reactivation of pulmonary tuberculosis is that caused by blows to the chest or crushing or squeezing injuries with fracture of the bones of the thorax. The force of the blow undoubtedly is a determining influence on the subsequent result, as is the question of where the blow strikes. It is hard to conceive of a blow on the left lower chest adversely affecting a right upper-lobe lesion. Yet both of these influences present imponderable aspects and are subject to varied interpretation

The late Dr Herman Biggs felt that percussion of the chest could traumatize the tuberculous lung. Many of us feel that the physical examination of the lungs with deep breathing and cough is not a beneficial influence on tuberculous lungs. Yet, a tunnel worker, a former tuberculous patient with a thoracoplasty on one side, in a mishap with compressed air was blown forcibly, landed with his opposite side against a heavy beam fracturing four ribs, but suffered no subsequent activation of his tuberculosis

The character of the disease process in the lung must also be considered in its relationship to trauma. The soft caseating or cavitating lesions, or the fresh inflammatory lesions which are progressive or on the verge of progression, are more susceptible to the adverse influence of trauma than the latent calcified or fibrotic lesions

The influence of sudden changes in atmospheric pressure or inclemency of

the weather is illustrated in the following cases. A diver whose breather line is blocked is rapidly hauled up and resuscitated. Shortly thereafter he has a hemoptysis. The following week he complains of languor and malaise with slight fever and cough ensuing. Six weeks after his accident x-ray reveals tuberculosis of his right lung. Or the fireman, fighting a bad fire on a cold winter day, is thoroughly drenched with water and frozen completely so that later he has to be thawed out. This is followed by a "cold" with subsequent malaise and fatigue. Three months after this episode it is diagnosed as a case of pulmonary tuberculosis

The inhalation or aspiration of foreign matter into the lungs as a factor in causing tuberculosis is well known to all and well illustrated by the silicotuberculosis of stone cutters. Less understood as a harmful influence is the inhalation of various gases. These undoubtedly cause edema and congestion of the bronchial mucosa and alveolar cells, giving rise to bronchitis and bronchopneumonia. With subsequent lowering of the patient's resistance it is possible that tuberculosis may develop. There is no agreement on this point, however. Hager<sup>6</sup> states that during the War tuberculosis was far less frequent than a form of chronic bronchitis as a consequence of gas attacks. Experimental work on rabbits exposed to various gases seems to indicate that the exposed animals are more resistant to tuberculosis than the unexposed animals. Von Steinmeyer<sup>6</sup> found in 2,284 cases of pulmonary tuberculosis in war veterans that 4.9 per cent had suffered gas poisoning. Generally, it is estimated that 2-3 per cent of those exposed to gas in the War developed tuberculosis later. Weinart and Minkowski<sup>6</sup> feel that carbon monoxide has more of a predisposing influence on the development of tuberculosis than other gases

Another question involved in this problem is: How much time can elapse following trauma before its effect on the lungs manifests itself? This, too, is a perplexing problem to ponder

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directly prior to the injury, (5) the known course of pulmonary tuberculosis

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### PRE-BUGGY MEDICINE—THE HORSEBACK DOCTOR

I have a personal knowledge of rural medicine extending beyond seventy years. At first, my father's only means of transportation was horseback, for a horse was quicker than a wagon and could go any place a man could go, and the horse rarely mired down.

There was a bond in those days between the patient and doctor that had a definite effect on the outcome of the case. One of the family went on horseback to fetch the doctor. The case was usually serious, for there was no telephone to call the doctor out of bed to see someone who was more worried than ill. Galloping hoofs and the snorting of a hard-running horse usually awakened the doctor before the call came "Ho, Doc! Ho, Doc! Hello, hello!" This was followed by pounding on the door of the white house located on the corner opposite the store in Union Village. If it was winter, Dad crawled out of the warm feather bed and, without waiting to put on shoes crossed the cold hall, and opened the east door.

"Ma's going to have a baby, Doc," was usually the message. Sometimes it was "the baby's got the croup" or "Grandpap's taken bad." No matter what the call, Dad went. To fetch a doctor meant to go after him and bring him back. It was usually a serious case and Dad stayed as long as he was needed, perhaps all night. A close bond existed between doctor and patient under such conditions and the faith in the country doctor came somehow very near to faith in God. They might pray for God to save the baby, but it was from the doctor that the miracle was expected and often came.

A daytime call often lasted into the night. I have heard my English mother get up and go to the kitchen when she heard horse's hoofs in the barnyard. She opened the drafts to the stove, and rattled the lids as she tried to get the fire roaring to make Dad something hot to drink and thaw him out. I have seen her help him out of his overcoat and stand it behind the stove—the coat so frozen that it would stand by itself until the warmth of the stove melted it into a crumpled heap of steaming wool which could then be hung up to dry. Dad always looked after his horse before he took care of himself, for it was on the horse that he depended for his transportation.

An unbelievable change has come to the practice of medicine since my father saddled his horse and flung the saddle bags on behind him and made his lone way to his patient. The doctor of today still has a black bag in which are a few emergency medicines, but in it also are the stethoscope, the sphygmomanometer, the otoscope, the ophthalmoscope, and other things used as aids in arriving at a diagnosis. Where my father practiced alone, the modern doctor of today knows that he has the city hospital with all its equipment at his call if he needs it, but the place of the general practitioner in the small city or rural community is still as important as ever because it is upon him that the responsibility falls for the proper diagnosis and treatment, or for referring to others for treatment, the persons who are sick in his locality.—O A Province, M.D., in the *Journal of the Indiana State Medical Association*

### A BACK-ACTION CURE FOR STOMACHACHE

The Attorney-General of Minnesota, Mr J A A Burnquist, in a recent address before the Minnesota State Medical Association told of a clever reply of a doctor on the witness stand in St. Paul some years ago. The Attorney-General first remarked that the manner in which some of our people can be deceived through quacks and swindlers of every kind and description is remarkable. It is claimed that it costs this country through the expense of all of its law enforcing agencies and the loss of property and life through fraud and crime approximately \$15 000,000,000 annually.

In speaking of the pretenders to medical skill, he remembered an incident in an action against one of them tried some years ago in the court house in the city of St. Paul. The defendant, who had become widely known as a

healer and who resided at Somerset, Wisconsin, had been sued in Ramsey County for \$25 000 by one of his patients because of an infection resulting from the application of a plaster to his back, the only remedy that the alleged doctor ever applied. The health commissioner of St. Paul was on the witness stand. He was asked by the attorney for the plaintiff the following question "Suppose," he said "a man has stomach trouble and he consults the defendant, who applies to his back a plaster consisting of turpentine, aloes, and other ingredients. Is that of any benefit to the stomach?" The doctor on the witness stand delayed his answer momentarily and then said, "Yes I think it would be of some benefit. The patient's back would pain him so much that he would forget all about his stomach."



After the World War, disability was allowed ex-service men for tuberculosis if it developed six months after discharge from the service. This time was gradually extended until it finally applied to cases developing tuberculosis eight or nine years after discharge from the service, thus showing the difficulty the service doctors had meeting this problem. Ornstein and Ulmar<sup>7</sup> feel that the disease must become manifest within two weeks following trauma to prove causative relationship. Lewy<sup>8</sup> states that the time lapsing between trauma and the development of tuberculosis must not exceed six months. Mayer<sup>9</sup> states that it may take months for tuberculosis to become manifest following trauma. Hager<sup>6</sup> states the usual interval is six months with a maximum period of twelve months. Krause<sup>5</sup> states "that with increasing experience, the open mind is bound to become more and more convinced that, as regards the possibilities of etiological factors in tuberculosis, there is no time element that can be fixed. A man may suffer an injury at almost any place in the body upon which some pulmonary disease may assert itself coincidentally or within a few days afterward or perhaps not until weeks, months, or even years following the injury." This will serve to show the wide variation of opinion on this question. I am inclined to feel that the development of tuberculosis later than two years following trauma would be open to a degree of skepticism.

Are there any protective measures that can be instituted against this hazard? Unfortunately, we can find but little help in this direction although we are not utterly helpless. An immediate roentgenogram of the chest of any person sustaining a chest injury would be highly desirable. If negative for disease, it will show the character and progress of any subsequent disease following trauma, enabling us to estimate the influence of this factor. Of course, we all must realize that a negative roentgenogram does not completely exclude the presence of disease. Studies have shown that 1 in every 6 persons dying of ailments other

than tuberculosis have caseating tuberculous foci in the lungs, and of these cases only about 40 per cent were detected by roentgen examination.

Should the roentgenogram reveal disease when taken, its course can be followed, subsequently, by serial pictures to determine any change in the lesion and whether it was a normal progress of the lesion as expected or one aggravated by the trauma. In cases of injury without chest involvement but where a long period of convalescence is anticipated or debilitating complications ensue, take a prophylactic roentgenogram of the chest for future reference if needed.

See that adequate and skilled care is given to every injured individual to minimize complications and prevent prolonged debilitating convalescence.

Think carefully of the problem of inhalation anesthetics in patients severely shocked after trauma.

Finally, consider the state of health of the patient at the time of trauma. Was he undernourished, suffering with diabetes, syphilis, arteriosclerosis, etc., at the time of injury—debilitating ailments rendering any trauma an extra health hazard? Had he recently recovered from any infectious disease or operation? Was he overfatigued, under the influence of alcohol? Answering these questions will aid greatly in judging the influence of trauma in the individual case.

Concluding, I should say that many of these cases present most difficult and almost insoluble problems which we must judge in the light of our experience with and conception of the disease. Our opinion many times is only presumptive, sometimes only probable, again merely possible.

Each case must be judged individually from the standpoint of (1) the degree of trauma sustained and its known variable effect on different individuals, (2) the presence or absence of manifest tuberculous disease at the time of injury, its character, extent, and subsequent course, (3) the time interval lapsing between trauma and onset of tuberculosis, (4) the state of health of the individual

TABLE 1 — DIAGNOSIS OF 100 ADMISSIONS TO ST LUKE'S HOSPITAL

4 Secondary anemia	1 Glandular dyscrasia
5 Asthma	1 Headache
5 Arthritis	2 Hematoma
2 Arthritis—rheumatoid	1 Hemorrhoids
1 Banti's disease	2 Hypertension
1 Biliary cirrhosis	1 Hypotension
2 Bronchiectasis	6 Malnutrition
2 Bronchopneumonia	1 Acute nephritis
1 Catarrhal jaundice	1 Glomerular nephritis
1 Cirrhosis of the liver	1 Osteoarthritis
1 Coryza	2 Pernicious anemia
1 Cerebrospinal lues	1 Pneumonia
1 Carcinoma of the stomach	1 Pulmonary hemorrhage
1 Cerebral neoplasm	1 Pain nausea & vomiting
2 Colitis	1 Pemphigus
7 Diffuse toxic goiter	1 Peripheral neuritis
7 Duodenal ulcer	1 Pellagra
2 Diabetes mellitus	1 Pulmonary tbc.
1 Diabetes mellitus & pulmonary tbc	1 Psychoneurosis
1 Emphysema	3 Acute rheumatic fever
1 Erythema multiforme	1 Rheumatic endocarditis
1 For diagnosis	1 Renal tumor
1 Fever of unknown origin	1 Thyroid enlargement (simple)
2 Gastric ulcer	1 Chronic tonsillitis
3 General arteriosclerosis	1 Ulcer of the foot—chronic
2 Toxic nodular goiter	4 Ulcerative colitis
2 Gingivitis	1 Ulcers of the mouth

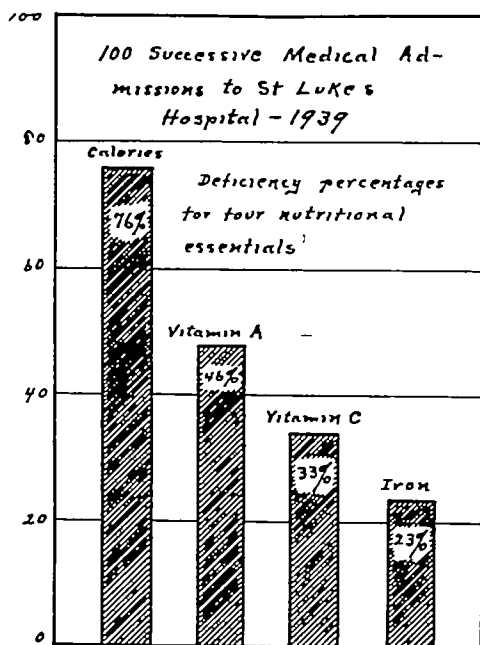


CHART 1

over on the Frober-Faybor biophotometer

**Vitamin C**—Vitamin C determinations were done on citrated blood taken before breakfast. The blood was examined by the method described by Farmer and Abt. In most instances the analysis was done at once. If a delay was unavoidable between the time of the collection of the blood and its examination, five drops of potassium cyanide, 10 per cent solution, were added to the specimen to prevent the oxidation of vitamin C. These specimens were examined within the next twelve hours.

Patients were regarded as deficient in vitamin C if the fasting blood cevitic determination was 0.70 mg per cent or less.

**Iron**—The percentage (or grams) of hemoglobin in the blood was adopted as the index of iron deficiency. The hemoglobin reading is an accurate index of iron deficiency with the possible exception of cases of Addison's (pernicious) anemia. In this series there were 2 cases of pernicious anemia. Patients were regarded as deficient in iron if the hemoglobin determination was 70 per cent (10.2 grams) or less. Hemoglobin determinations were done with the Sahli Hemoglobinometer.

**Calories**—Caloric deficiency was measured by comparing the patient's actual weight with his ideal weight, as de-

termined by the usual actuarial tables. If the weight was less than the "ideal," the patient was regarded as deficient in calories. No attempt is made in the charts to record the degree of deficiency. It is admitted that the usual actuarial tables are based on "average" weights of normal individuals and make no allowance for differences in body build. For the thin-skeletoned, tall individual, the figures in the tables are high, and for the thick-skeletoned, stocky individual, they are low. Nevertheless, for a sufficiently large group of individuals these two types check each other, and a trend in a group toward overweight or underweight can be detected.

### Analysis of Findings

The results of the investigation of the four nutritional elements are shown in Chart 1. One hundred individuals were examined, 35 men and 65 women. Seventy-six were ward patients and 24 were clinic patients.

Their ages varied from 10 to 80 years. Fifty-four different medical conditions were encountered.

# A NUTRITIONAL STUDY

## Analysis of 100 Medical Admissions to St. Luke's Hospital

JAMES RALPH SCOTT, M D , F A C P , and MARGARET McALLISTER JANEWAY, M D ,  
New York City

(From Medical Division A, St. Luke's Hospital)

THE purpose of this investigation was to determine the extent to which nutritional deficiency exists in the ward and clinic admissions of St. Luke's Hospital. The intention was not to make an exhaustive nutritional study of all patients, but rather to examine a cross section for evidence of deficiency in certain nutritional elements.

The selection of individuals for study was limited to 100 cases admitted to the wards and clinic after the investigation was begun. This eliminated any basis of selection other than chance. That it was fairly representative of medical admissions is evident from the list of diagnoses shown in Table 1.

The nutritional elements investigated were vitamins A and C, iron, and calories.

### Methods and Criteria

*Vitamin A* —There has been a tendency in recent literature to denounce the usefulness of the biophotometer as a means of detecting vitamin A deficiency. We are convinced by our experience that the biophotometer in the hands of an experienced technician is a useful means of measuring the presence and degree of vitamin A deficiency.

If we accept the premise that light adaptation is dependent on the regeneration of visual purple in the retina and that this is dependent on the amount of available vitamin A, we must conclude that any means of measuring light adaptation is an indirect way of measuring the vitamin A stores of the body. The Frober-Faybor biophotometer is one device for measuring light adaptation. The technic of operation of this instrument is available. For lack of space it will not be described here.

In our experience the Frober-Faybor biophotometer will detect vitamin A deficiency. Our one criticism of its efficacy is that it may be too sensitive. That, however, is erring in the safe direction, for, thus, cases of subclinical avitaminosis A are not neglected.

It cannot be denied that there are certain subjective elements in biophotometric determinations that might affect its accuracy. But that is true of many methods of clinical investigation. In our experience there is a greater consistency between the initial and subsequent biophotometric readings than exists, for example, in similar determinations of the basal metabolic rate.

Several months were devoted to perfecting a technic for biophotometric readings before the final method was evolved which was employed in the present series of cases. The most helpful single modification was the employment of two successive readings on each examination. In the hands of an experienced technician, these two readings are practically identical and remain consistently so in the initial examination and in subsequent examinations.

An obvious source of error is an actual dimness of vision which might occur, for example, in cataract. In these instances the biophotometer would indicate a deficiency in vitamin A even though the patient were not deficient, for the test depends upon the ability to see a dim light. To avoid this error all patients showing a deficiency by the biophotometer, were tested for vision. If the vision was found to be below 20/30, they were excluded from this series. Patients were regarded as deficient in vitamin A if their biophotometric reading was 0.840 M V C or

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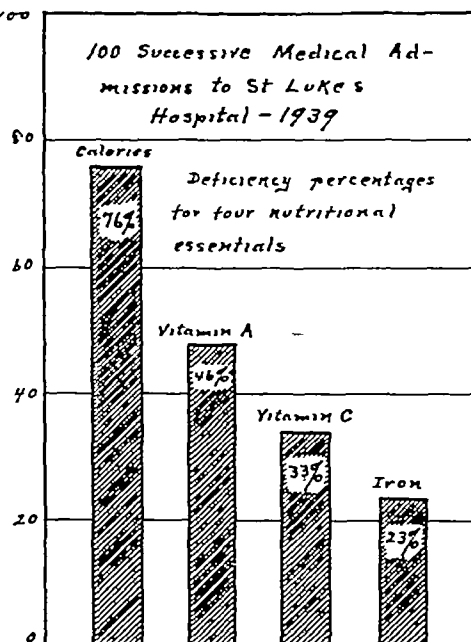


CHART 1

termined by the usual actuarial tables. If the weight was less than the "ideal," the patient was regarded as deficient in calories. No attempt is made in the charts to record the degree of deficiency. It is admitted that the usual actuarial tables are based on "average" weights of normal individuals and make no allowance for differences in body build. For the thin-skeletoned, tall individual, the figures in the tables are high, and for the thick-skeletoned, stocky individual, they are low. Nevertheless, for a sufficiently large group of individuals these two types check each other, and a trend in a group toward overweight or underweight can be detected.

### Analysis of Findings

The results of the investigation of the four nutritional elements are shown in Chart 1. One hundred individuals were examined, 35 men and 65 women. Seventy-six were ward patients and 24 were clinic patients.

Their ages varied from 10 to 80 years. Fifty-four different medical conditions were encountered.

TABLE 2—AN ANALYSIS OF THE REGULAR WARD DIET AT ST. LUKE'S HOSPITAL

Carbohydrate	255 Gm.
Protein	73 Gm.
Fat	88 Gm.
Calories	2,100
Optimal Standard for Normal Adult	
Calcium	1 21 Gm
Phosphorus	1 43 Gm
Iron	0 0149 Gm
Vitamin A	4 850 I U
Vitamin B <sub>1</sub>	314 I U
Vitamin C	996 I U
Vitamin D	73 I U
Vitamin G	750 S U

75 per cent of the patients were deficient in calories

46 per cent of the patients were deficient in vitamin A

33 per cent of the patients were deficient in vitamin C

23 per cent of the patients were deficient in iron

Contrary to our expectations, no correlation could be demonstrated between the diagnosis and the degree or character of the deficiency except where an obvious relation existed, such as iron deficiency in anemia, etc. In other words, the nutritional deficiencies of this group are probably a reflection of their economic status and their nutritional habits as much as the condition for which they sought admission. Whether due to any one or all of these causes, a nutritional deficiency is demonstrated. It should receive appropriate treatment. Treatment of the nutritional deficiency should accompany and supplement the treatment of the specific ailment which brings the patient to the hospital.

## Discussion

It follows from the above findings that a fortification of the regular ward diets by the addition of certain vitamins must be considered. This is now being done at St. Luke's, even though the regular ward diets contain an adequate amount of the "protective" substances (with the exception of vitamin D).

An analysis of the regular ward diet for adults at St. Luke's Hospital, based on the average daily consumption over a period of two weeks is shown in Table 2.

The regular ward diets are designed to supply the accepted adequate amounts of minerals and vitamins for an adult, at bed rest, without disturbed metabolism. It will be noted that an adequate amount of the "protective" substances (for adults) is provided by our regular ward diet with the single exception of vitamin D. The deficiency in vitamin D is easily overcome by the addition of viosterol. The salt content (Na Cl) of this diet averages 7 grams daily. With salt used from the tray, the daily intake would probably be increased to 10 grams. The ash of the diet is sufficiently alkaline to necessitate adjustments to produce a lowered pH on the urologic wards.

It must be emphasized that the "adequate protective amount" of essential nutritional substances, particularly the vitamins, means the quantity of these substances necessary to protect against manifest signs of the corresponding nutritional deficiencies. In other words, it means the quantity necessary for *prevention* of these deficiency states. For the *treatment* of deficiency states, however, it is generally acknowledged that dosages varying from three times to ten times the protective amount of these substances are necessary to restore the patient to normal. A considerable number of the patients included in this study proved to be deficient in one or more of the four nutritional elements included in the investigation. They should receive the corresponding substances, especially the vitamins, in quantities in excess of the adequate "protective" dosage.

It has been found by most students of nutrition that where a deficiency in one essential nutritional element exists, other nutritional deficiencies are present. In other words, multiple deficiency is the rule rather than the exception. Therefore, in order to be on the safe side, *all* protective substances should be added to the diets of these patients. This is particularly true for the vitamins, for, as yet, no simple clinical test for deficiency is available for the vitamins except for vitamin A and vitamin C. Where it is impossible to make vitamin studies on

every patient, it is advisable to give added concentrates to *all* patients, for, as shown in this study, 1 out of 2 are deficient in vitamin A, and 1 out of 3 are deficient in vitamin C

To meet this need for additional vitamins, a "vitamin cocktail" has been devised. This consists of

- 2 level tablespoonfuls of brewers' yeast powder
- 5 drops of haliver oil and viosterol
- 1/2 glass of grapefruit juice
- A sweetening syrup adds to the palatability of this drink.

These substances are thoroughly mixed in a Waring mixer and served iced three times daily, usually after meals. The approximate value of this "cocktail" in vitamins is given in Table 3

Since this "cocktail" is given three times daily, the amount of vitamins given to the patient per day by this means is

B <sub>1</sub>	750 I U (International Units)
B <sub>2</sub>	1,260 S U (Sherman Units)
A	25,500 I U
D	5,100 I U
C	1,320 I U

We are assured by our pharmacist that the cost of three cocktails does not exceed five cents per day per patient.

In addition to the vitamins A, D, and C, this "cocktail" provides the whole B complex which is known to be superior to the sum of its known purified components (thiamin, riboflavin, and nicotinic acid). This is the prophylactic medication now employed on Medical Division A for all chronic illnesses and the convalescent stage of acute illnesses. Iron, of course, is given when the hemoglobin and red cell determination indicates a need for it. For the acute specific vitamin deficiencies, thiamin chloride, cevitic acid, or liver are given parenterally as indicated, in addition to the "cocktail," and additional

TABLE 3—ANALYSIS OF THE VITAMIN COCKTAIL

2 Level tablespoonfuls of brewers yeast (5 Gm.)	B <sub>1</sub>	250 I U
	B <sub>2</sub>	420 S U
5 Drops of haliver oil and viosterol (3 minims)	A	8,500 I U
	D	1,700 I U
1/2 Glass of grapefruit juice (4 oz.)	C	440 I U

nicotinic acid or riboflavin is given by mouth. When the signs and symptoms of acute deficiency disappear, parenteral therapy is discontinued and all of the vitamins are given by mouth.

### Summary

1 An investigation of 100 medical admissions to St. Luke's Hospital was made to determine the extent to which nutritional deficiency exists among the ward and clinic patients.

2 The nutritional elements investigated were vitamins A and C, iron, and calories.

3 Methods and criteria are discussed.

4 Analysis of findings show that 76 per cent of the patients were deficient in calories, 46 per cent of the patients were deficient in vitamin A, 33 per cent of the patients were deficient in vitamin C, 23 per cent of the patients were deficient in iron.

5 The method employed at St. Luke's Hospital for fortification of the regular ward diets with the essential food accessories is discussed in detail.

We are indebted to Miss Mary R. Curfman, director of dietitians of St. Luke's Hospital, for the analysis of the regular ward diet composing Table 2.

We are indebted to our technicians, Miss Emily Cross, Mrs. Edward Herbert, Jr., and Mrs. Hugh Martin, for their painstaking care and skill in securing the vitamin A determinations.

960 Park Avenue  
140 East 54th Street

An interesting feature of a recent broadcast on cancer sponsored by the New York Academy of Medicine was the testimony of a physician and a businessman, both of whom had been cured of cancer.

"The best use to which man can put his predatory instincts is the ruthless pursuit of hidden disease. The hunting in the field of tuberculosis is unusually good"—*Nat. Tuberculosis Assn.*

# APPLICATIONS OF ELECTROENCEPHALOGRAPHY IN THE PRACTICE OF MEDICINE

HANS STRAUSS, M D , New York City

(From the Department of Psychiatry, New York State Psychiatric Institute and Hospital, New York City)

IN 1929 Hans Berger<sup>2</sup> reported the possibility of recording from the scalp electrical potentials originating from the human brain. The resulting records have been called the electroencephalogram (EEG). Since Adrian,<sup>1</sup> in 1934, confirmed Berger's discovery and, by virtue of his authority, relieved the initial skeptical attitude, research in this field has been taken up on a large scale, especially in this country. The progress that has been made has brought electroencephalography into the realm of practical applicability in medicine. For this reason the practicing physician should be familiar with this technic and procedure and should know in what cases it can be of diagnostic value. It is the aim of this paper to give this information.

## The Technic

The recording apparatus consists essentially of three parts: the electrodes, the amplifiers, and the writing system. The *electrodes* most commonly used are small solder buttons in which the lead wires are imbedded. The electrodes have a depression on one side which is filled with electrode paste to guarantee a good contact with the scalp. The electrodes are fastened to the scalp by collodion. They are small enough so that the hair does not have to be shaved or cut. After recording, the collodion holding the electrodes is removed with acetone leaving no residue. The number and placement of electrodes used depend on the specific diagnostic problem to be solved by the recording. Since it is necessary to obtain comparable records from each hemisphere in determining bilateral differences, the symmetrical placing of electrodes on both sides should be used for this purpose. The *amplifiers* are of special construction

and serve the purpose of amplifying the low-voltage currents obtained from the scalp to a voltage high enough to activate the writing system.\* The *writing system* most commonly used is an ink writer the construction of which is similar to that of a loud speaker, the main difference being that a pen is attached to the coil and that it is especially adapted to the wave frequencies originating from the brain. It is important to have several, at least two, well-matched recording systems at one's disposal. This makes it possible to record simultaneously from various parts of the brain and compare exactly the difference in their electrical activity. A very important accessory part of the equipment is a shielded room or bag which is necessary to keep out of the amplifying system electrical potentials originating outside the patient. As the amplification is very high and the currents obtained from the brain are of very low voltage the entrance of even very low-voltage currents emitted by the light lines or other electrical structures would cause serious distortions of the record. During the recording standard conditions have to be maintained. The patient lies relaxed with the eyes closed in a dark and semi-soundproof room. A trained observer, usually a nurse, is present in this room during the recording in order to observe the patient and to signal movement or other incidents that might influence the record.

## Normal and Abnormal Electroencephalogram<sup>11</sup>

The potentials originating from the brain are of very low voltage ranging in

\* The inserted records were taken with a resistance capacity coupled push pull amplifier constructed by Mr. W. E. Rahm, Jr.

normal cases between 5 and 100 microvolts (1 microvolt = 1/1,000,000 volt) Such potentials appear with various frequencies Two frequency bands are of special importance (1) the alpha waves (curves 1 and 2) which consist, in adults, of frequencies of 8-12 cycles per second, (2) the beta waves (curve 2) consisting of frequencies ranging from 17-30 cycles per second

The appearance of serial frequencies of 6 cycles and less per second (so-called delta waves) in adults is definitely abnormal—also is the presence of differences in amplitude and distribution of frequencies between symmetrical leads from both sides of the head (curve 3) These two symptoms (abnormally slow potentials and bilateral difference) are the most important guides in the diagnosis of abnormal conditions

### Epilepsy and Related Disorders

The most impressive abnormal electroencephalographic pattern is that of the petit mal seizure<sup>7</sup> It shows a regular alternation between a sharp spike and a slow wave with a frequency of the pattern of 3 or close to 3 per second (curve 4) The knowledge of this pattern is of great value in the diagnosis of many cases in which the question of petit mal arises, but abnormal potentials are also found in many epileptics between the seizures They appear as series of slow waves at a frequency of from 3-6 per second<sup>7,8</sup> The finding of such potentials is, of course, of great importance in separating hysterical or other conditions from epilepsy An improvement of the epileptic condition during treatment is often accompanied by an improvement in the EEG<sup>13,15,17</sup> Electroencephalographic control is, therefore, very useful in adjusting the treatment in such epileptics who have only rare seizures Without the assistance of the EEG we can obtain a judgment upon the result of the treatment only by waiting for the next seizure With the EEG we are able to check the result of the treatment continuously and to adjust it to the needs of the patient without losing time

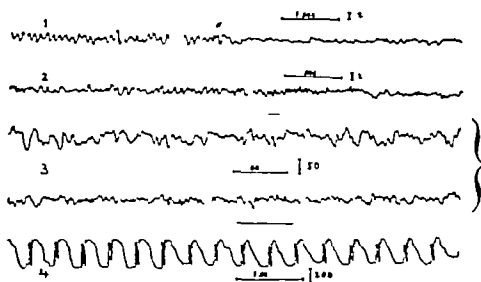


FIG 1 Electroencephalographic records (curves 1-4) The vertical lines correspond to the indicated number of microvolts (1) Alpha activity disappearing at \* indicating the beginning of optic stimulation. (2) Alpha activity and burst of beta activity (3) Bilateral difference between right (top) and left (bottom) hemisphere in right-sided porencephaly (4) Petit mal seizure.

In the field of epilepsy the EEG is also helpful in determining the primary focus of the convulsions<sup>9,10,12</sup> This is done by determining from which part of the cortex abnormal potentials appear at the beginning of the seizure, and in which part of the brain they appear most frequently and show the highest amplitude between seizures In this way the localization of the place for a possible surgical treatment can be obtained

Abnormally slow potentials as found in epileptics between seizures can also be observed in a number of relatives of some epileptics<sup>19</sup> Studies of this sort are as yet incomplete but are being continued to discover their significance for the heredity of epilepsy and for eugenic measures The same slow potentials can also be found in a group of difficult children<sup>14,18</sup> showing behavior disorders of the conduct type with severe irritability and instability Since a group of these "epileptoid" children showing a definite electroencephalographic pattern reacts favorably to treatment with benzedrine sulfate while similar cases with a different EEG do not,<sup>5</sup> the EEG is of value in determining the therapy in these cases

### Organic Pathology of the Brain

The EEG helps not only in making the diagnosis of organic pathology but also in localizing it<sup>4,20,21</sup> Thus we were able to diagnose an underlying organic pathology



in a group of children with behavior disorders. They did not show any neurologic symptoms, hence the diagnosis was possible only through the use of electroencephalography or pneumoencephalography.<sup>18</sup> In accident cases the EEG can be used to determine the presence and to follow the course of an organic damage. This seems of high importance for the legal aspect of many of these cases, but the most important and most complicated task of practical electroencephalography is the diagnosis and localization of brain tumors. In this work particularly it is necessary to have long experience in reading and evaluating the records so that correct interpretations may be made. In this difficult field electroencephalography is making steady progress.

### Other Applications

It is a well-known fact that the alpha activity recorded from the occiput disappears or at least becomes greatly reduced when the eye is stimulated by light (curve 1).<sup>3</sup> This enables us to diagnose whether a patient is blind or not. The definitely abnormal pattern of the EEG in sleep and intoxications with various anesthetics makes it possible to differentiate between sleep, intoxications, and states of stupor, e.g., hysterical or catatonic stupor.

There is no doubt that many other practical applications of electroencepha-

lography will be developed. This is especially true since this method can be easily applied, causes the patient no discomfort, and places him in no danger.

But in spite of all its advantages, electroencephalography like every other diagnostic aid should only be used to make a diagnosis in combination with all the other available methods. If this is done electroencephalography will be a useful aid in our endeavors to help the patient.

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### FIVE "DON'TS" FOR MOTOR ACCIDENTS

Sharply critical of what he termed Rochester's "complacency in tolerating needless loss of life, physical suffering, and destruction of property" in traffic accidents, Dr. Harold H. Baker, chairman of the newly created public safety committee of the Monroe County Medical Society, calls for a revolution in public attitude.

"We are not having the reduction of accidents in this district to which we are entitled," Dr. Baker declared in a Medical Society broadcast. "In the Rochester area in 1939 there were more killed and more injured than in 1938. There should have been a reduction instead of an increase."

Dr. Baker also warned persons at accident scenes not to move injured persons except under instruction of a physician or other competently trained persons. He listed the following five rules to be observed at accident scenes:

"Don't allow an injured person to be pulled out from under an automobile. Always lift the object from the body."

"Don't straighten limbs which are bent at queer angles, and don't pull a protruding bone back into the flesh."

"If the injured person can move his arms but not his legs, his back may be broken. Don't move him. Particularly, if lying face down, don't turn him over. Await the ambulance."

"Don't fail to await the arrival of instructed persons in a first-aid station, police car, or ambulance, and on their arrival don't fail to cooperate."

"Don't fail to realize that more damage may be done by conscientious, well meaning, unnecessary assistance than by keeping hands off. If you do not know what you are doing, do nothing."

# Legislative News

Bulletin No 6  
(February 15, 1940)

THE Legislature, because of illness among its leaders, may not be able to adjourn as early as there were hopes that it would, but, nevertheless, it is exceedingly important that each reader of the *Bulletin* take up immediately with his Assemblymen and Senators the enactment of the following two bills Senate Int. 508, Print 519—Desmond, Assembly Int 695, Print 706—Vincent, relative to the practice of radiology, and Senate Int 927, Print 1053—Page, Assembly Int. 1399—Milmoë, relative to the endorsement by the Board of Regents of medical licenses granted in other states or countries. These two important bills can be passed this year if every one of our readers does his share. Please do not think that there is no necessity for your attending to this matter because you think all the other persons will do it. Rather look at it this way—since none of the others is likely to remember to discuss the matter with his legislators, it is exceedingly essential that you do so.

Inquiry among the legislators in previous winters has shown us that very few doctors take these requests of ours seriously. As a result, when something undesirable happens, the doctors charge the legislators with being political or neglectful of the physicians' interest, when the truth of the matter is that none of their physicians has taken a sufficient interest in the matter to advise them of his wishes. Mr. Vincent yesterday showed me the correspondence he has had thus far on his radiology bill. I was amazed, there were but twelve letters from physicians urging its enactment and a majority of these came from New York City, and one letter in opposition. I hope that within the next week he and members of the Education Committee will receive a hundred letters urging its enactment.

## New Bills Introduced

Senate Int. 1095—Buckley, repeals provision relating to nurses' registry and provides for licensing nursing bureaus in cities, upon payment of fee of \$25 to mayor or commissioner of licenses, surety bond of \$1,000 to be filed and records of applicants and employments to be kept open for inspection, false advertising is prohibited. Referred to the General Laws Committee.

Senate Int 1100—Janes, Assembly Int. 1339—Wadsworth, provides for physical repair of handicapped adult unemployed persons by city and county assistance districts with partial reimbursement by state, judge of district to pass upon applications that require approval of State Social Welfare Department through an advisory council of eight which is here created to supervise the administration, makes other provisions. Referred to the health committees.

COMMENT Assemblyman Wadsworth introduced a similar bill last year, which some of you will recall. During the summer he had

several conferences on the matter and this new draft is a result of those conferences. If you would like to read the bill, we shall be glad to send you a copy on receipt of your request.

Senate Int 1158—Mahoney, Assembly Int 1420—Mailier, makes internship of not less than twelve months in hospital in this country or Canada a condition prerequisite to receiving license to practice medicine. Referred to the education committees.

COMMENT This bill is a result of the request of our House of Delegates that a year's internship be added to the medical course. The bill requires that a medical student take his examination after completion of the one year's internship. Some have suggested that the student should be permitted to take his examination under the State Board of Medical Examiners at the completion of the four years' work, and if he successfully passes the examination, his license could be granted him after completion of the year's hospital work. If the student elects to do his internship in a hospital far away from New York State, it will not only be inconvenient but expensive for him to return to the state at the end of the year in order to take his licensing examination. There is also a question as to whether the student will be as well prepared to take his examination after spending a year as an intern.

Assembly Int. 1363—Ryan, prescribes the percentages of alcohol required to be found upon chemical analysis in the body of a person charged with operating a motor vehicle while intoxicated as presumptive evidence that defendant was or was not intoxicated. Referred to the Judiciary Committee.

COMMENT The percentages are as follows: The presence of fifteen hundredths of 1 per cent or more of alcohol in the blood, urine, or breath shall be presumptive evidence of intoxication, while the presence of five hundredths of 1 per cent or more but less than fifteen hundredths shall be relevant evidence of intoxication, and the presence of less than five hundredths of 1 per cent shall be presumptive evidence that the defendant was not intoxicated.

Assembly Int. 1373—L. Bennett requires physicians to report cases of infantile paralysis to local health officer or to state department, creates in State Health Department a division to investigate cause, mortality rate, prevention and cure of infantile paralysis and allied diseases and appropriates \$35,000. Referred to the Ways and Means Committee.

COMMENT The State Department of Health is carrying on, under the present setup, all of the work that is outlined in this bill.

Assembly Int 1399—Milmoë, relative to the endorsement by the Board of Regents of medical licenses granted in other states or countries.

COMMENT Same as Senate Int. 927—Page, reported in Bulletin No 5.

Assembly Int 1477—Fogarty, provides that employees mentally disabled as result of accident arising out of employment shall be entitled to receive medical care and maintenance in public hospital or institution at expense of employer and without deductions from compensation payable to him Referred to the Labor Committee.

#### Action on Bills

S Int 97—Graves	Manufacture and sale of adulterated foods	Passed Senate, third reading in Assembly
S Int 310—Hastings	Deaf children reports, New York City	Passed Senate, in Assembly Health Com
S Int 314—Condon	Workmen's compensation, physicians' reports	Reported
S Int 709—Condon	Workmen's compensation, volunteer firemen	Reported
A. Int. 195—Vincent	Criminal code, drug violations	To Governor

#### Hearings

Feb 20	Bills relating to sale of fireworks	Joint hearing before codes committees
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#### Congressional Bills

Senate 3230, by Mr Wagner, to promote the national health and welfare through appropriation of funds for the construction of hospitals Mr Lee, of California, has introduced the same bill in the House of Representatives, where it is known as H R 8240 This bill was drafted to incorporate the suggestions contained in the message the President submitted to Congress on January 23

Senator Mead, in Senate 3246, has incorporated the objectives of the President's message in a little different way His bill has been introduced in the House of Representatives by Mr Schulte, of Indiana, and is known as H R. 8288

Both of these bills and the President's message you will find in the February 10 issue of the J.A.M.A., pages 494, 495, and 496 They should be carefully studied

JOHN L BAUER  
LEO F SIMPSON  
WALTER W MOTT  
*Committee on Legislation*  
JOSEPH S LAWRENCE  
*Executive Officer*

### Bulletin No 7

(February 23, 1940)

#### Bills Introduced

SENATE INT 1284—Joseph, provides compensation for mentally disabled employees Referred to the Labor Committee

COMMENT Same as Assembly Int. 1477—Fogarty, reported in Bulletin No 6

Senate Int 1289—Condon, defines practice of radiology as practice by person examining human body by use of x-rays or by means of fluoroscopic exhibition or by shadows registered with photographic material, certain persons and corporations are excepted from requirements of the bill Referred to the Education Committee.

COMMENT This bill is identical with the original Desmond-Vincent bill except that there is added to section 3, page 2, the following "Provided, however, that such prohibition shall not apply to any person, firm or corporation which shall have been continuously and actively engaged in the practice of radiology for at least one year prior to July 1, 1940"

Assembly Int. 1491—Boccia, limits to eight hours a day and forty-eight hours a week, the hours of labor of graduate and practical nurses in hospitals in New York City, excepts administrative officials and members of religious orders acting without pay Referred to the Labor Committee.

Assembly Int. 1643—Jarema, repeals provision which gives hospitals a lien for persons injured as result of negligence. Referred to the Judiciary Committee.

Assembly Int 1661—Armstrong, requires a physician treating an injured employee entitled to workmen's compensation award, to furnish employer and industrial commissioner, within fifteen instead of twenty days after preliminary notice, a more complete report and subsequent thereto progress reports bi-weekly or at less frequent intervals as requested, authorizes board where employer fails to secure compensation, to make award for medical services to physician or hospital Referred to the Labor Committee

#### Action on Bills

S Int 10—Williamson	Nurse preference, military service	Reported
S Int 240—Young	Sale of narcotic drugs	Third reading
S Int. 314—Condon	Workmen's compensation, physicians' reports	Passed Senate, in Assembly Labor Com.
S Int. 508—Desmond	Practice of radiology	Amended

This bill has been amended by changing the definition of radiology in the following manner The part enclosed in brackets is to be dropped from the definition

7-a Radiology means that method of medical practice in which demonstration and examination of the normal and abnormal structures, parts or functions of the human body are made by use of x-rays, and any person who

"(a) makes or offers to make for a consideration a demonstration or examination of a human being or a part or parts of a human body by means of fluoroscopic exhibition or by the shadow or shadows registered with photographic materials and the use of x-rays, except a person employed by and acting for and under the supervision and authority of another person who is duly qualified under the provisions of this article, or]

"(b) holds himself out to diagnose or able to make or makes any interpretation or explanation by word of mouth, writing or otherwise of the meaning of a fluoroscopic or registered shadow or shadows of any part of the human body made by use of x-rays, shall be deemed to be engaged in the practice of radiology within the meaning of this article "

S Int. 599— Condon	Work men's compensation, physicians' fees	To Governor
S Int. 709— Condon	Work men's compensation, volunteer firemen	Third reading
S Int. 856— Graves	Sale of ice cream	Third reading
A Int. 195— Vincent	Criminal Code, drug violations	Recalled from Governor
A. Int. 477— Vincent	Sale of narcotic drugs	Reported
A. Int. 695— Vincent	Practice of radiology	Amended to agree with S Int. 508

The following bills were acted upon by the Legislative Committee this week

#### Approved

S Int. 927—Page	Endorsement by Board of Regents of medical licenses granted in other states or countries
A. Int 1399—Milmoe	
S Int. 1158—Mahoney	Medical licenses, internship
A. Int 1420—Mailler	

The House of Delegates, by resolution, has approved an amendment to the law which will require that students complete a year's internship in an approved hospital before they are granted a license to practice. This bill carries that provision, but several questions have arisen as to whether or not this is the exact wording that such a law should have. A great many objections have already been filed to the provision that the student will not be permitted to take his examinations until after he has completed the year's internship. The committee is inclined to agree with those who feel that the

student should have an opportunity to take his examinations under the examining board at the termination of the four-year medical course, but that he should be given no license to practice until he has satisfactorily completed his year's internship. This recommendation will be made to the introducers of the bill

#### Opposed

S Int. 968—Phelps	Nurse Practice
A Int 1219—Wagner	

The committee opposed this bill because it provides that the nurse examining board shall have added to its personnel representatives of two labor unions. The committee thinks that the examination of nurses is purely an educational matter and the personnel of the board should be selected with that point in view

A Int 1181—Goldstein	"Open" hospitals
S Int 1100—Janes	Physical repair of adult unemployed persons
A Int. 1339—Wadsworth	

The Committee is sympathetic with the objective of this bill but hesitates to endorse it because it considers that the persons whom it is intended to benefit can secure immediate surgical assistance at present if it is made clear to the operating surgeon that the patient has limited funds but, depending upon the success of the operation, will have steady employment offered him and that an effort will be made to pay the surgeon after employment is resumed. The committee is of a further opinion that serious abuses are certain to arise in its administration.

A. Int. 1363—Ryan	Motor vehicle operators, presumptive evidence of intoxication
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The committee disapproved this bill because of the difficulty there is in determining what percentage of alcohol in the blood may be said to indicate drunkenness in any particular individual. The bill arbitrarily states that the presence of a certain amount shall not be considered evidence of drunkenness

A. Int. 1373—L Bennett	Infantile paralysis, reporting
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The committee considers the provisions of this bill unnecessary inasmuch as already all of this work is being satisfactorily done by the Department of Health

JOHN L BAUER  
LEO F SIMPSON  
WALTER W MOTT  
*Committee on Legislation*  
JOSEPH S LAWRENCE  
*Executive Officer*

The Division of Laboratories of the Department of Hospitals has inaugurated a series of clinical-pathological conferences to be held on the fourth Tuesday of each month in the amphitheatre of the C & D Building of Bellevue Hospital from 3 30 to 4 30 P.M.

Antemortem and postmortem records of cases of the many institutions under the supervision

of the Department of Hospitals will be presented Dr Douglas Symmers, General Director of Laboratories, will act as chairman. These conferences will make available to all members of the medical profession and medical students, the pathologic specimens gathered from the various municipal institutions. The first conference will be held on March 26, 1940

# Medical News

## American Red Cross

**A**T THE request of the Surgeon General of the Army and in compliance with its policy of cooperation with both the Army and Navy, the American Red Cross, as an expansion of its peace-time service for the military forces, has undertaken the enrollment of various types of medical technologists who are willing to serve in the medical departments of the Army and Navy if and when their services are required at the time of a national emergency

Persons with the following qualifications will be enrolled

- Chemical Laboratory Technicians (male)
- Dental Hygienists (male and female)
- Dental Mechanics (male)
- Dietitians (male and female)
- Laboratory Technicians (male and female)
- Meat and Dairy Hygienists (Inspectors) (male)
- \* Nurses (male)
- Occupational Therapy Aides (male and female)
- Orthopedic Mechanics (male)
- Pharmacists (male and female)
- Physical Therapy Technicians (Aides) (male and female)
- Statistical Clerks (male and female)
- X-Ray Technicians (male and female)

General qualifications for enrollment are as follows (1) citizens of the United States, (2) ages 21-45 years (Army), 18-35 (Navy—*men only*), (3) physically qualified—applicants must pass a satisfactory physical examination, according to standards set respectively by the Army and Navy medical departments, (4) women

applicants must be unmarried, (5) all applicants must express a willingness to serve as a technologist in time of a national emergency

Male technologists will be eligible for enlistment in the Army as noncommissioned officers in the grades of sergeant, staff sergeant, or technical sergeant. Women technologists and men who do not qualify physically will be eligible for employment by the Army as civilians

For the Navy, male technologists will be eligible for enlistment in the Naval Reserve as petty officers—Pharmacist's Mates 3d, 2nd, and 1st Class and Chief Pharmacist's Mate (acting appointment). Women technologists are not eligible for service in the Navy under present plans

The Medical Department of the Army will require a considerable number of technologists in each of the above-named groups. The Navy Medical Department requirements will be similar except for dietitians, occupational therapy aides, orthopedic mechanics and dairy and food hygienists (inspectors) who will not be needed. Notwithstanding the maintenance of this enrollment the Navy also desires peace-time enlistment in the United States Naval Reserve, and male technologists who wish to enlist in the Naval Reserve are urged to communicate direct with the commandant of the naval district in which they reside. The address of their commandant will be furnished upon request

Technologists who qualify according to these general standards and who are willing to enroll for service as outlined above should communicate with the American National Red Cross, Washington, D C

## County News

### Albany County

Albany Town Meeting met in the state college for teachers on February 21 to consider "The Mutual Responsibilities of Medicine and Government to American Health"

The speakers were Dr Terry M Townsend of New York City, president of the State Medical Society, and Dr Hugh Cabot of Boston, medical author and former member of the staff of Mayo Clinic

### Chemung County

The Chemung County Medical Society met on February 6 at the St. Joseph Hospital, in conjunction with the hospital staff

City Manager Klebes, of Elmira, appeared and asked for opinions on the conviction of people under the influence of alcohol while driving. Many members expressed opinions, and the city manager thanked them for their aid

Mr Shepherd and Mr Seymour of the Blue Cross Insurance Plan appeared, and indicated that in Chemung County the receipts from

the insurance plan were equal to or less than the disbursements to the hospitals. They suggested that the members of the society, whenever possible, discourage persons from going to the hospital for minor illnesses

Dr J M Swan appeared before the society and spoke on the work of the National Society for the Control of Cancer. He urged the society to appoint a cancer committee to work with the National Society. On the motion of Dr Booth, seconded by Dr Burke, Jr, it was decided that the Committee Minora be empowered to nominate a county cancer committee. The motion was carried

Dr Tillou reported for the Committee on Medical Economics and Public Relations on the practices carried on by the district welfare officers, where hospitalization was refused, and patients transferred from their private physicians to one designated by the welfare officers. Dr Tillou then moved that the Committee on Medical Economics and Public Relations be empowered by the society to contact the county welfare commissioner, and express the dissatisfaction of the society with the present situation. The motion was seconded and carried

\* This group will not be members of the Army or Navy Nurse Corps which under basic law are limited to females but will be used as technologists for service auxiliary thereto

Dr Larkin, reporting for the Compensation Committee, gave the rating of the new members and asked that the society authorize the Compensation Committee to buy twenty thousand C-4 and C-104 compensation blanks. This was authorized by a motion of Dr Burke, Sr., and carried.

Dr Burke, Sr., reporting for the Ways and Means Committee, moved that the report of this committee be accepted by the society. The motion was seconded by Dr Lewis and carried.—*Reported by F S Hassett M.D Acting Secretary*

#### Clinton County

The Clinton County Medical Society is cooperating with the Clinton County Home Bureau to bring the topic of cancer control to the attention of the public.

During February, each home bureau unit had as its guest speaker a physician to discuss the subject of "Cancer Control."

Fourteen addresses were given at meetings in various parts of the county in February.

#### Dutchess County

Dr Louis Hurxthal, chief of the Lahey Clinic, Boston, and an authority on endocrinology, addressed the monthly meeting of the Dutchess County Medical Society at the Amrita Club in Poughkeepsie on February 14. Motion pictures were shown to illustrate various points.

Dr Arthur F Hoag, a physician at Millerton for sixty years, died on February 18, at the age of eighty-three. He was town health officer for thirty years.

#### Genesee County

Participation in the Western New York Medical Plan, Inc. affording medical and surgical care in a manner similar to that of group hospital insurance, was voted by the Genesee County Medical Society at a meeting on February 8 at the Hotel Richmond, in Batavia. Fifteen physicians attending the meeting gave the new system unanimous endorsement.

The society nominated D W Tomlinson of Batavia, and Seely F Pratt, of Le Roy, as their choices for lay members of the area board of directors. Dr G Henry Knoll, of Le Roy, is the organization's medical nominee.

#### Greene County

At a special meeting of the Greene County Medical Society held at the Memorial Hospital at Catskill recently, a majority of the members voted in favor of petitioning the Board of Supervisors for an appropriation to pay the salaries and expenses of county health nurses.

A committee composed of Dr Mahlon H Atkinson and Dr William A. Petry, both of Catskill, and Dr Norman S Cooper, of Athens, was appointed to attend a meeting of the supervisors and discuss the matter with the board.

#### Kings County

The scientific program of the Medical Society of the County of Kings on February 20 included these features: Address "Who Shall Lead the Leaders?" Dr Terry M Townsend, president, Medical Society of the State of New York.

Address "Surgical Management of Diseases of the Biliary Tract," Dr Richard B Cattell, Lahey Clinic, Boston.

The program of Friday afternoon lectures for March in the MacNaughton auditorium is as follows: March 1—"Infections of the Hand, Diagnosis and Modern Treatment," Dr Robert F Barber, March 8—"Diagnosis and Treatment of Tumors of the Breast," Dr John F Erdmann, March 15—"Differential Diagnosis and Treatment of the Anemias," Dr Paul Reznikoff, March 22—(No Lecture—Good Friday), March 29—"Early Recognition and Management of Mental Disorders," Dr Irving Sands.

A new drug, sulfathiazole, may soon take the place of sulfapyridine in the treatment of pneumonia, according to Dr Charles F Pabst, chairman of the Press Reference Committee of the Kings County Medical Society, as quoted in the Brooklyn *Eagle*.

A small group of physicians have been conducting experiments for the past six months with the new drug, like sulfapyridine, a derivative of sulfanilamide, he said. Very little of this drug is available at present and it will not be available for general use until released by the Food and Drug Administration.

The advantage of the new drug over sulfapyridine in the treatment of pneumonia, if the experiments prove it to be completely valuable and safe, is that it would prove less toxic than sulfapyridine. A search for a drug that would eliminate to a greater degree the toxic effects sometimes accompanying sulfapyridine, such as nausea, vomiting, and skin rashes, has been going on for some time.

Early reports on sulfathiazole are very promising, Dr Pabst pointed out. They also indicate that it may be highly effective in combating the staphylococcus, one of the common germs like streptococcus, which causes infections. Sulfapyridine and sulfanilamide, although valuable in the treatment of streptococcal infections and pneumococcal infections, have not been found effective against staphylococcus.

At the same time research into new methods of administration of sulfapyridine in pneumonia cases so as to eliminate the toxic effects has been going on, Dr Pabst said, citing a report by Dr Maurice J Dattelbaum, president-elect of the society and a member of the staff of Beth-El Hospital, in which he says he found that the nausea and vomiting so often accompanying the use of sulfapyridine can be avoided by administering the drug rectally. This does not interfere with the beneficial action of the drug and is particularly useful in the treatment of children, it was said.

Dr William S Collens, a member of the press committee and a member of the staff of the Israel-Zion Hospital, has reported promising results following the use of sulfapyridine locally in certain types of gangrene. Sprinkled in powder form directly on the infection it has in some cases halted the spread of the gangrene and has reduced accompanying infections.

The Ocean Medical Society met on February 19 at the Savoy Gardens and heard a paper on "Endocrinological Consideration of the Menopause," by Dr Raphael Kurzrok, Manhattan.

# Medical News

## American Red Cross

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# Medicolegal

## Disciplinary Proceedings—Effect of Pardon

**A** FEW months ago the highest court of one of the southern states handed down a decision in which an unusual point was involved in connection with the disciplining of a physician.\*

It appears that one P was, prior to November, 1929, a regularly licensed practicing physician. He was at that time convicted in the appropriate court of perjury, possession of stolen goods, and grand larceny, and sentenced to a five-year term of imprisonment in the state penitentiary. Later, in March, 1933, the State Board of Pardons granted him a full and complete pardon of the said offenses.

After the effective date of the said full and absolute pardon the Board of Medical Examiners instituted proceedings before it in order to 'revoke, suspend, or annul' the license to practice medicine which P had possessed. The ground of the disciplinary proceedings was specified by the Board of Medical Examiners as that he had been convicted of a felony by a court of competent jurisdiction.

P thereupon petitioned the Supreme Court (the highest court of the state) for a writ of prohibition to prevent the Board of Medical Examiners from going ahead with the disciplinary proceedings. The contention of the petitioner was that the pardon granted in 1933 amounted to a full and complete defense to the proceedings before the Board of Medical Examiners and was of such legal effect as to deprive that board of all jurisdiction to hear and determine the case. The response of the Board of Medical Examiners was by way of so-called demurrer, admitting as true the facts of the petition but denying that the petition set forth a cause of action. In substance the board asserted that the pardon did not operate to prevent it from proceeding with disciplinary action against P.

The argument before the court on behalf of P made the claim that as the pardon was full and complete, P stood before the board as though the crimes had never been committed. The court adopted a different view of the situation. While a pardon may restore one to civil rights it does not wipe out all the consequences of the acts of the pardoned person. The court quoted the following in its opinion as a statement of the effect of a full and absolute pardon:

'When a full and absolute pardon is granted it exempts the individual upon which it is bestowed from the punishment which the law inflicts for the crime which he has committed. The crime is forgiven and remitted and the individual is relieved from all of its legal consequences. The effect of a full pardon is to make the offender a new man. While a pardon has generally been regarded as blotting out the existence of guilt, so that in the eye of the law the offender is as innocent as if he had never committed the offense it does not so operate for all purposes and as the very essence of a pardon is forgiveness or remission of penalty a pardon

implies guilt, it does not obliterate the fact of the commission of the crime and the conviction thereof, it does not wash out the moral stain, as has been tersely said, it involves forgiveness and not forgetfulness."

The court sustained the demurrer and held that the pardon was no defense to the proceedings before the Board of Medical Examiners, saying in the course of its operation:

It cannot be contended here that the Legislature had not the power to require, as a condition to the right to practice medicine, that the practitioner shall not only be learned in the profession but have in addition thereto the qualifications of honor and good moral character. It cannot be overlooked that the health of a citizen is his greatest asset. It was the will and desire of the Legislature that the life, limb and health of its citizens should not be intrusted to quacks, adventurers and to those of questioned integrity. The doors of our homes should not be opened to receive men who hold themselves as qualified medical practitioners when in truth and in fact they have been convicted of crime and this fact alone throws much light upon the question of character. It is not, as a rule the good people who commit crime. The Legislature enacted that a practitioner of medicine who had been convicted of a felony in the courts may have his license revoked or annulled. The adjudication of his guilt of a felony thereby violating the criminal laws rendered the medical practitioner a man of such character as to render it unsafe to trust the lives and health of the citizens to his professional care."

It should be noted that the court merely ruled that disciplinary proceedings could go forward before the Board of Medical Examiners but expressed no opinion as to the legal sufficiency of such proceedings.

## X-Ray Treatment of Malignancy

**A** WOMAN whose condition had been diagnosed as carcinoma of the colon was referred to a physician specializing in radiology for deep x-ray therapy. He administered to her six x-ray treatments covering a period of a month. She received 1,400 r units to the front of the abdomen and the same amount to the back over the course of the entire treatments. Upon the completion of the treatments the patient's condition was satisfactory and she showed no signs of any superficial burns. About ten days later the patient returned to the physician's office complaining of burns and upon examination he found the skin of the lower abdomen reddened and peeling to the extent of a mild second-degree burn. He advised her with respect to the care of the condition and in about two weeks time the skin had entirely healed.

A subsequent checkup with the referring physician showed that the x-ray treatments had been successful in retarding the progress of the intestinal ailment.

A malpractice action was instituted against the radiologist in which the charge was made that the x-ray treatments were negligently rendered so as

\* Page v. Watson 192 Southern 205



Discussion Dr E D Resnik, Dr L Kurzrok, and Dr C H Birnberg

The Academy of Pediatrics heard this program on February 28 "Studies on Hypothyroidism in Childhood," by Dr Lawson Wilkins, Baltimore, "The Management of Endocrine Disturbances During Adolescence," by Dr Bruce Webster, Manhattan.

The East New York Medical Society met at the Temple Auditorium on March 4. A paper was presented on "Experiences in the Treatment of Subacute Bacterial Endocarditis," by Dr Saul R. Kelson.

The Ridgeboro Medical Society will hold its annual dinner and dance on March 23 at the Murray Hill Hotel.

### Montgomery County

Dr Charles L. Buxton, attending physician at the Sloane Hospital for Women, New York City, addressed the Montgomery County Medical Society on February 13 on the topic "Indications for Endocrine Therapy," with special reference to the female sex hormones and the dangers of indiscriminate use of these preparations.—*Reported by Roger Conant, M.D., Secretary*

### New York County

The meeting of the Medical Society of the County of New York on February 26 had as its program a symposium on sulfanilamide and sulfapyridine as follows: (1) "Chemotherapy in Meningitis," by Dr Josephine B. Neal, (2) "The Use of Sulfapyridine in the Treatment of Pneumococcus Pneumonia," by Dr Joseph J. Bunim, by invitation, (3) Discussion: Urology—Dr Arthur H. Milbert, Obstetrics and Gynecology—Dr William E. Studdiford, Dermatology—Dr Howard Fox, Surgery—Dr Russel H. Patterson, Otolaryngology—Dr Frank C. Carr, Ophthalmology—Dr David H. Webster, Pediatrics—Dr Bela Schick.

A field hospital of eighty beds for Finland is being organized here with Dr Dwight B. Fishwick, of Bellevue Hospital, in charge. He will have the services of four American doctors and twelve nurses, already recruited, using six ambulances. Funds are being raised in the United States for a continuous supply of dressings, instruments and other equipment. Dr. Carnes Weeks, of the faculty of the College of Physicians and Surgeons, acts as medical adviser of the movement.

A proposed experiment is being considered for the medical care of the poor in a low cost housing development in the Corlears Hook section. Details are given in the *New York Medical Week* for February 17.

### Niagara County

The Medical Society of the County of Niagara, meeting at the Niagara Club on February 13, deferred action on a proposal to establish a medical indemnity insurance plan in the county after the members had expressed a desire to observe results of the plan in other parts of the state. The one hundred doctors present voted to defer final decision on the plan for one year.

Speakers at the meeting were Dr James P. Cole and Dr J. Edwin Alford, Buffalo specialists. Dr Cole's subject was "Low Back Pain," and Dr Alford reviewed a paper on "The Surgical Treatment of Carcinoma of the Rectum and Colon."

### Oneida County

The Medical Society of the County of Oneida is inaugurating a new phase of medication by giving radio broadcasts on health. The February program was as follows: February 5—Dr T. Wood Clarke—"A Century and a Half," February 12—Dr Richard H. Hutchings—"Nervous Prostration," February 19—Dr Karl W. Gruppe—"The Common Cold," February 26—Dr Martin J. A'Hearn—"Pneumonia."

The annual election of officers took place at the monthly meeting of the Utica Academy of Medicine, Hotel Utica, January 18. Dr W. W. Wright, superintendent of Marcy State Hospital, was elected president. The other officers are: Dr C. H. Baldwin, vice-president, Dr A. R. Hatfield, secretary, Dr H. D. Parkhurst, treasurer, trustees, Dr J. L. Golly and Dr J. W. W. Dimon.

At the meeting of the Utica Academy of Medicine on February 15, Dr Jesse G. M. Bullowa spoke on pneumonia, with discussion opened by Dr David Kidd. Dr T. Douglas Kendrick spoke on "Current Diabetic Trends."

### Orange County

Dr Terry M. Townsend, president of the Medical Society of the State of New York, exposed the fallacies of the Wagner Bill on February 13 before Orange County doctors and the Twentieth Century Club at Newburgh, and Dr Frederic E. Elliott described the plan of the Medical Expense Indemnity Fund.

### Queens County

On February 15 a "Symposium on Vitamins" featured the scientific session of the Rockaway Medical Society. The session was held at the Lawrence Village Park clubhouse.

Speakers included Dr Selig Hecht, Dr Irving S. Wright, Dr Benjamin Kramer, and Dr Herbert Pollack. Dr Everett C. Jessup, of Roslyn, opened the discussion.

### Rensselaer County

A silent motion picture in three reels on the science and art of obstetrics, was shown at the February meeting of the Rensselaer County Medical Society at the health center in Troy.

The film was prepared by Dr Joseph B. DeLee, chief of staff of the Lying-In Hospital, Chicago, and founder of the Chicago Maternity Health Center.

### Steuben County

Dr John W. Keeler, practicing physician since 1908 and for many years health officer of the town of Urbana and village of Hammondsport, died suddenly at his home in the village on February 8.

# Woman's Auxiliary

To the Medical Society of the State of New York

**T**HE second meeting of the executive board of the New York State Woman's Auxiliary was held February 7 and 8 at Albany, New York. The Albany County Auxiliary entertained the guests with a cocktail party Wednesday evening, and the executive board and guests for the meeting were later entertained at dinner by the president, Mrs G Scott Towne. After dinner there was informal discussion of some later auxiliary plans.

On February 8 the board members convened at the De Witt Clinton Hotel for the business session. Mrs Towne, president of the State Auxiliary, presided. Thirty-eight members answered to roll call. Reports of officers, committee chairmen, and county presidents were interesting and informative, proving there is great interest in the many activities of the Auxiliary.

Since assisting the Physicians' Home financially is a project of the State Auxiliary for this year, Mrs John L Bauer gave some interesting information about the Home. It is to be hoped that each county auxiliary will assist in this most worthy cause. Mrs George Green has taken charge of the sale of a beautiful piece of needlepoint donated by Mrs Louis Van Kleeck and Mrs Edwin Griffin. The sale will take place at the State Convention in May in New York City and the proceeds will be donated to the Physicians' Home.

It was suggested that a pin be presented to each retiring president of the State Auxiliary as a token of the esteem of the members. Mrs Edwin Griffin was appointed to submit plans for such a gift at the next meeting.

Suggested revisions in the constitution were read by Mrs Francis Irving, chairman of revisions committee.

A copy will be sent to each county auxiliary. These revisions will be voted upon at the convention in May.

Convention chairman, Mrs Louis Lally, reported that arrangements were almost completed for the convention of the State Auxiliary in May. Since each county auxiliary should be well informed on matters of legislation a request was made that copies of the report of Mrs Albert Vander Veer, chairman of legislation, be sent to each auxiliary president. Organization chairman, Mrs Thomas Bullard, reported one new county auxiliary since the October meeting with the promise of seven more counties to be organized by May. The report of each chairman of standing committee gave evidence of much time spent in performing the duties peculiar to her office.

New York State Auxiliary will be official hostess to the A.M.A. Auxiliary at the convention in June to be held at the Hotel Pennsylvania in New York City. Mrs Carlton Potter, who has made arrangements for convention meetings, stated that the A.M.A. convention was last held in New York in 1917.

Mrs Towne expressed appreciation for the cooperation of each member of the executive board. She feels that a feeling of friendship has been promoted by the many contacts made during the meetings and this alone might be sufficient reason for the existence of the Auxiliary. The history of the Auxiliary from 1922 to 1940 is to be published.

Interesting reports of the activities of twenty of the county auxiliaries concluded the meeting. The next meeting of the executive board will be held in New York City in May.

## County News

### Albany

At the regular meeting of the Albany County Auxiliary with Mrs J J Clemmer, the president, presiding, Dr Joseph Lawrence spoke on the Wagner Health Bill.

The auxiliary entertained the executive board of the State Auxiliary on February 7 at a cocktail party.

### Broome

The Broome County Auxiliary had as guest speaker at their recent meeting Dr Edward Jones whose subject was "New Treatment of Pneumonia." A report was given concerning legislation in regard to socialization of medicine.

The auxiliary has sponsored an essay contest in the Binghamton schools and will continue it through the other schools of the county. Two Junior High School students were present at the meeting to read prize essays. Besides prizes, subscriptions to *Hygeia* were given to the schools of the winners.

Broome County Auxiliary has voted to take charge of the work of the Field Army for Cancer Control in the community.

### Cayuga

Mrs George Sincerbeaux presided at the regular February meeting of the Cayuga County Auxiliary held at Auburn City Hospital. The revised constitution was read and accepted. The auxiliary voted to assist in raising funds for the Physicians' Home.

The auxiliary assisted the Medical Society with a card party held at the Cayuga Museum of History and Art. The proceeds from the party will be used to purchase cases to house the Medical Historical Exhibit which is to be permanently located at the museum.

### Columbia

A meeting of unusual interest was the recent one of Columbia County Auxiliary held at Cavell House, the Nurses' Home of the Hudson City Hospital. Mrs William Collins, the president, presided. During the business meeting it was voted to send ten dollars to the Physicians' Home. Dr James Boland, acting health commissioner of Columbia County, sent an invitation to the auxiliary to attend a meeting in recognition of Social Hygiene week. At the conclusion of

to cause serious burns to be sustained by the plaintiff

Shortly before the case was to be reached for trial plaintiff's attorney obtained an order requiring the defendant to be examined before trial. Upon the examination before trial apparently he learned for the first time the serious nature of the condition which the defendant had undertaken to treat with x-ray and also learned for the first time that the reaction which the patient developed was not unusual considering the type of treatment which was rendered. He thereupon discontinued the malpractice action.

### Fistula Following Delivery

A WOMAN thirty-four years of age consulted a physician specializing in surgery and obstetrics at a time when she was in her seventh month of pregnancy. She was complaining of pains in the back and pains on urination, but examination revealed that she was in satisfactory condition. He advised with respect to her diet and general activities

The doctor then went away on vacation, and when he returned, the first time he saw her he was called to her home. He found her in labor with the cervix almost fully dilated. The head was very high at the time and there was slight edema of the genitalia. He administered ether, tried to dilate the cervix and deliver the child by means of the high forceps method. He found the head too high and delivery impossible. He, thereupon, referred the case to a hospital where she went under the care of other physicians. It seems the next day the patient was delivered by law forceps of a stillborn child. The first physician while he watched the delivery took no part in it. Subsequent to discharge from the hospital patient developed a vesicovaginal fistula.

A malpractice action was instituted against the physician charging him with responsibility for the course of suffering which the patient went through. Plaintiff's attorney, however, failed to put the case on the calendar for trial, and after some time elapsed a motion to dismiss the action for lack of prosecution resulted in an order dismissing the summons and complaint.

### FINNISH RELIEF FUND

The Finnish Relief Fund, Inc., is sponsored by Mr. Herbert Hoover. It is approved by the Finnish Minister in Washington, D. C., His Excellency Hjalmar Procopé. It has the main purpose of accepting for the Finnish people and transmitting to Finland any funds contributed for this great cause by the American people.

Contributions, unless specifically intended to be used for war material, will be used for food and clothing for the Finnish civilian population, many of whom are suddenly made homeless by having their houses irreparably demolished by the incendiary bombs from Russian aeroplanes.

Members of the American Medical Association are the only doctors who will be asked to contribute through this Fund. It is hoped the profession will respond as generously as possible. It is further hoped that every doctor will make some contribution, and no matter how small it may be, it will be gratefully accepted. We believe the profession should have 100 per cent of its members become contributors to this most worthy cause.

No money is deducted for expenses from any contribution made through this Fund, and every dollar donated arrives in Finland worth one hundred cents. No salaries are paid and no financial remunerations are made to officers on duty with the Finnish Relief Fund. Expert auditors make a daily checkup of the donations acquired and chart the results.

The National Chairman of the Medical Division of the Professional Groups of the Finnish Relief Fund, Inc., is Dr. John Frederick Erdmann, of New York. A director (chairman) for the Medical Division has been or will be appointed from each state who will try to get in touch with every member of the American Medical Association of that state by such method as he deems best. The Executive Director of the Medical Division is Dr. Kerwin W. Kinard who has offices at Fund Headquarters.

All checks should be made payable to the Finnish Relief Fund, Inc., and sent to the Medical Division of the Finnish Relief Fund, Inc., 420 Lexington Avenue, New York, N. Y.

### Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Elizabeth N. Arnstein	37	P & S N Y	February 23	Manhattan
George Ball	53	L I C. Hosp	February 17	Brooklyn
Leon Bowman	66	P & S N Y	February 11	Manhattan
Bruce F. Daniels	32	Boston Univ	February 13	McGraw
George M. Fisher	71	Albany	February 25	Utica
George W. Greene	77	N Y Univ	February 14	Auburn
Arthur F. Hoag	81	P & S N Y	February 18	Millerton
Elmer W. Powers	69	Vermont	February 13	Westfield
William C. Roser	—	L I C. Hosp	February 15	Boonville
Edward K. Ross	—	P & S N Y	February 21	Manhattan

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue Brooklyn, N Y Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers

## RECEIVED

**The New International Clinics. Original Contributions Clinics, and Evaluated Reviews of Current Advances in the Medical Arts** Edited by George M Piersol, M D Volume IV, New Series Two Octavo of 339 pages, illustrated Philadelphia, J B Lippincott Co, 1939 Cloth, \$3 00

**The Hospital Care of Neurosurgical Patients** By Wallace B Hamby, M D Octavo of 118 pages, illustrated Springfield, Charles C Thomas 1940 Cloth, \$2 00

**A Mirror for Surgeons. Selected Readings in Surgery** By Sir D'Arcy Power, K B E, F R C S Octavo of 230 pages Boston, Little Brown & Co, 1939 Cloth, \$2 00

**A Manual for Diabetic Patients.** By W D Sansum, M D, Alfred E Koehler, Ph D, and Ruth Bowden, B S Octavo of 227 pages, illustrated New York, Macmillan Co, 1939 Cloth, \$3.25

**Proctoscopic Examination and Diagnosis and Treatment of Diarrheas.** By M H Streicher, M D Octavo of 149 pages, illustrated Springfield, Charles C Thomas, 1940 Cloth, \$3 00

**Roentgen Technique** By Clyde McNeill, M D Octavo of 315 pages, illustrated Springfield, Charles C Thomas, 1939 Cloth, \$5 00

**Medical Climatology** Climatic and Weather Influences in Health and Disease. By Clarence A Mills, M D Octavo of 296 pages, illustrated Springfield, Charles C Thomas, 1939 Cloth \$4 50

**Cancer of the Colon and Rectum. Its Diagnosis and Treatment.** By Fred W Rankin, M D, and A Stephens Graham, M D Quarto of 358 pages, illustrated Springfield, Charles C Thomas, 1939 Cloth, \$5 50

**Handbook of Skin Diseases** By Leon H Warren, M D Duodecimo of 321 pages New York, Paul B Hoeber, Inc, 1940 Cloth, \$3 50

**Unto the Fourth Generation** Gonorrhea and Syphilis What the Layman Should Know By Irving Simons, M D Octavo of 243 pages, illustrated New York, E P Dutton & Co, 1940 Cloth, \$2 50

**An Introduction to Gastro-Enterology** Being the Third Edition of the Mechanics of the Digestive Tract by Walter C Alvarez Quarto of 778 pages, illustrated New York, Paul B Hoeber, Inc, 1940 Cloth, \$10

**Medicolegal and Industrial Toxicology, Criminal Investigation, Occupational Diseases.** By Henry J Edmann, Ph D Duodecimo of 324 pages. Philadelphia, Blakiston Co, 1940 Cloth, \$3 00

**Cardiovascular-Renal Disease** A Clinicopathologic Correlation Study Emphasizing the

**Importance of Ophthalmoscopy** By Lawrence W Smith, M D, Edward Weiss, M D, and others Quarto of 227 pages, illustrated New York, D Appleton-Century Co, 1940 Cloth, \$4 50

**A Textbook of Laboratory Diagnosis. With Clinical Applications for Practitioners and Students** By Edwin E Osgood, M D Third edition Octavo of 676 pages, illustrated Philadelphia, Blakiston Co, 1940 Cloth \$6 00

**Surgical Diagnosis.** By Stephen Power, M S Octavo of 228 pages, illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$4 50

**Fundamentals of Biochemistry in Relation to Human Physiology** By T R Parsons, M A Sixth edition. Duodecimo of 461 pages, illustrated Baltimore, William Wood & Co, 1939 Cloth \$3 00

**Demonstrations of Physical Signs in Clinical Surgery** By Hamilton Bailey, F R C S Seventh edition Octavo of 310 pages, illustrated Baltimore, Williams & Wilkins Co, 1940 Cloth, \$6 50

**Standard Methods of the Division of Laboratories and Research of the New York State Department of Health.** By Augustus B Wadsworth, M D Second edition Octavo of 681 pages illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$7 50

**Massage and Remedial Exercises in Medical and Surgical Conditions.** By Noel M Tidy Fourth edition. Octavo of 458 pages, illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$5 25

**Recent Advances in Neurology** By W Russell Brain, D M Fourth edition Octavo of 364 pages, illustrated Philadelphia, Blakiston Co, 1940 Cloth, \$5 00

**The Therapeutics of Internal Diseases** Edited by George Blumer M D Volume I Quarto of 872 pages, illustrated Volume II Quarto of 1042 pages, illustrated New York D Appleton-Century Co, 1940 Cloth \$10 per volume.

**Argyria.** The Pharmacology of Silver By William R Hill, M D, and Donald M Pillsbury, M D Octavo of 172 pages Baltimore, Williams & Wilkins Co, 1939 Cloth, \$2 50

**The Interrelationship of Mind and Body** Volume XIX of a Series of Research Publications of the Association for Research in Nervous and Mental Disease Octavo of 381 pages Baltimore, Williams & Wilkins Co, 1939 Cloth, \$6 00

**Sexual Pathology** A Study of Derangements of the Sexual Instinct. By Magnus Hirschfeld, M D Octavo of 368 pages New York, Emerson Books, Inc, 1940 Cloth, \$2 95

the business meeting the guest speaker, Mrs Albert Vander Veer, state chairman of legislature, presented the content of many bills affecting medical practice. At the close of Mrs Vander Veer's talk a social hour was enjoyed.

#### Fulton

At the recent monthly meeting of the Fulton County Auxiliary held at the Johnstown Hotel, Dr Joseph Lawrence was the guest speaker. His topic was "Why an Auxiliary?" At the close of his talk Dr Lawrence held an open forum and answered many questions concerning the purpose and formation of an organization of this type. After a brief business session a social time was enjoyed.

#### Jefferson

The Jefferson County Auxiliary has been hearing about some of the social work done in its own county. At a dinner meeting at the Black River Valley Club, Miss Angie Kellogg, Jefferson County agent for dependent and delinquent children, spoke about her work in the community. At the February meeting Miss Nellie Horton, executive secretary of the Jefferson County Association for the blind, spoke of her work.

#### Nassau

At the regular meeting of the Nassau County Auxiliary, Mrs Luther Kice, the president introduced the guest speaker, Miss Nina Ridenour, member of the New York State Committee on Mental Hygiene. Miss Ridenour urged the interest of her audience in a preventive rather than a curative campaign. The auxiliary plans to conduct a mental hygiene institute in March. Three new members were welcomed. A social hour followed the meeting.

#### New York

Books on the needlepoint, to be drawn May 7 at the State Convention, were sent to County Program Chairmen February 8. As this project is under the sponsorship of the program chairmen for this year, all are urged to give the books their prompt attention. Please save these directions as regards remittance for the same. No stubs will be counted in the drawing unless paid for at that time.

Stubs, books sold, and unsold portions thereof are to be brought to the Convention by the delegates together with the money thus raised. Checks are to be made out to Mrs Carlton Potter, state treasurer. One check will then be drawn and paid to the Physicians' Home for which the funds are thus being raised. Donations being sent for the Home should be forwarded to Mrs Potter at 425 Waverly Ave., Syracuse, New York, giving the name of the

county so donating. County program chairmen are urged to see that funds are collected and turned over to the delegates before they leave for the Convention, as well as the stubs, etc., as above outlined.—*Mrs G A Green, State Program Chairman*

#### Rockland

The New York State Reconstruction Home was the meeting place for the Rockland County Auxiliary last month. The Home is located at West Haverstraw. The members of the auxiliary were welcomed by the superintendent of the Home, John B Kelly. Miss Whitten, principal of the school, spoke of the work done in the school. The home is for crippled children and has with its physiotherapy department and its school the most complete setup of its kind probably in the world. It is the only institution, primarily a hospital, which also offers a curriculum carrying through from nursery school through high school and postgraduate work.

After the meeting the women visited the physiotherapy department and the classrooms and were then entertained at tea by the teachers of the school.

#### Saratoga

The Saratoga County Auxiliary elected the following officers for their new term: president, Mrs T C Bullard, vice-president, Mrs James Roohan, treasurer, Mrs Arthur Leonard, secretary, Mrs George Wilson, recording secretary, Mrs Edward Callahan, twelve acting committee chairmen.

#### Schenectady

The regular meeting of the Schenectady County Auxiliary was held in the Doctors' Library at the Ellis Hospital with Mrs William Mailha, the president, presiding. The guest speaker of the afternoon was Mrs William Jameson, who with her husband, Dr Jameson, recently returned from Ceylon. Mrs Jameson spoke of her life in Ceylon. A social hour followed the meeting.

#### State News

*Convention Publicity Bulletin No 1*—The 18th Annual Convention of the Woman's Auxiliary to the American Medical Association will be held in New York City, June 10-14, 1940, with headquarters in the Hotel Pennsylvania. In view of the fact that the second edition of the World's Fair will accelerate advance hotel reservations, it is urged that reservations be made immediately through the Housing Bureau which has been set up by the American Medical Association, namely Dr Peter Irving, Room 1036, 233 Broadway, New York City.

So many physicians are writing best-sellers, said Denney Kenney, that the nurse now greets you in the waiting room with, "Sorry, but the doctor can't see you this month, he's on his next novel."—*Philadelphia Inquirer*

Patient "Whose statue is that in front of the hospital?"

Nurse "That's no statue, that's a WPA worker."—*Bulletin of the Burcombe County (N C) Medical Society*

**A Textbook of Clinical Neurology with an Introduction to the History of Neurology** By Israel S. Wechsler, M.D. Fourth edition. Octavo of 844 pages, illustrated. Philadelphia, W. B. Saunders Co., 1939. Cloth, \$7.00.

This edition maintains the same high degree of excellence possessed by the "previous births." The author has met his usual high standard of being first on the scene with new neurologic concepts.

The book is divided into five parts. Part 1 deals with Method of Examination, Part 2, the Spinal Cord, Part 3, the Peripheral Nerves, Part 4, the Brain, Part 5, the Neuroses.

The Introduction to the History of Neurology, which though placed last, is of great importance. The author steps up the art of neurology when he adds this chapter, for the student gains from it a clear concept of the firm basis on which the specialty of neurology is grounded.

Some 160 illustrations, well selected, add to the instructive importance of this well-known book, correcting a fault found in other works on the nervous system.

The subject of neuritis has been revised completely. Dr. Wechsler, as a pioneer contributing to the recognition of the importance of vitamin deficiency in the production of a neuropathy, is well qualified to present the newest aspects of this subject.

No effort has been spared to bring this book up to date, which increases its already proved value as the textbook for medical students.

HAROLD R. MERWARTH

**Modern Medicine in the United States: Past Achievements and Solution of Present Day Problems** By S. Adolphus Knopf, M.D. New York University, and Paris Major Medical Officers Reserve Corps (Aux.) U.S.A. Formerly Professor Phthisiotherapy at the New York Post-Graduate Medical School, Columbia University, etc. Copyright, 1939. Published 1939.

This monograph is based on a careful analysis of modern medicine in the United States with particular reference to past achievements, socialized or State medicine, and the rational solution of these problems. Dr. Knopf's past experience has well fitted him for such a study and monograph. Unessential details are left out but he briefly analyzes what socialized medicine offers to the doctor and why such a program must fail to improve medical care for the public. In a concise manner, he has analyzed the reason why compulsory insurance and group practice will not benefit the public. He segregates the duties of the Department of Health from those of the private practitioner and tells why they are so distinctly definite problems. The Wagner Health Bill is analyzed and adequate information and statistics given to show why such a program is inadvisable. The autocracy in Europe makes problems different from those in a democratic country like ours. He, further, has made specific suggestions, both for rational insurance and the care of the aged physician, but, primarily, suggestions for economy and efficiency in the extension of public health facilities. There are also suggestions for solution to satisfy the cry, "want of adequate medical care everywhere and for all who need it but cannot pay for it." The

right of the patient to choose his physician is summarized and the tactfulness and compassion of medical and social workers stressed.

Dr. Knopf has briefly but thoroughly analyzed the past and present medical practice in the United States and has given some excellent suggestions for its improvement in the future. This monograph is well worth the time of every thoughtful practitioner of medicine, as well as the public, who is interested in the past as well as the future improvement in medicine.

R. B. HENLINE, M.D.

**You Can't Eat That! A Manual and Recipe Book for Those Who Suffer Either Acutely or Mildly (and Perhaps Unconsciously) from Food Allergy** By Helen Morgan. Octavo of 330 pages. New York, Harcourt, Brace and Co., 1939. Cloth, \$2.50.

Helen Morgan's popular book is a fast, furious, and racy account of the allergic's dilemma. That Miss Morgan has rendered a useful function in this interesting enigma is to say too little of an excellently written manual.

The book is divided into three main parts. The first gives a lucidly dramatic but optimistic description of the woes and tribulations of the allergic.

Part two, which forms the major contents of the manual, gives a listing of interesting original substitution recipes for which the domestic allergic would be grateful but which are highly impractical for our modern housewife. One might call this section of her manual a glorified cook book.

Part three to the reviewer is most valuable. Miss Morgan has taken great pains to assemble a mass of intelligent data, giving the analysis of almost all of our present-day prepared foods. Frequently, patients have requested information regarding the ingredients of this or that product. Invariably it was necessary to seek this from the manufacturers or do without the product. Here is a carefully compiled list of prepared food products.

This manual should do for the allergic what other well-known popular diet books have done for the diabetic.

SAMUEL ROSENFELD

**The Vaginal Diaphragm. Its Fitting and Use in Contraceptive Technique** By LeMon Clark, M.D. Octavo of 107 pages, illustrated. St. Louis, C. V. Mosby Co., 1939. Cloth, \$2.00.

The author discusses thoroughly only one method of contraception, namely, the use of the diaphragm pessary combined with a spermicidal jelly or cream. He includes a description of the various types of vaginal diaphragms and indications for their use, the influences of gynecologic lesions on the type of pessary to be used, the proper methods of insertions, and the contraindications to their use. A surprising number of pitfalls and common errors in the use of this method of contraception are clearly pointed out, with explanations as to how these may all be avoided. The book should aid in more correct application of what appears to be one of the most modern methods of contraception.

ALEXANDER H. ROSENTHAL

**On Oxidation, Fermentation, Vitamins, Health, and Disease** By Albert V Szent-Györgyi, M D (Abraham Flexner Lectures Series Number Six) Octavo of 109 pages Baltimore, Williams & Wilkins Co, 1939 Cloth, \$2 00

**Medical Care** Number 4 of Volume VI of "Law and Contemporary Problems" Quarto Durham, Duke University Press, 1939 Paper, \$75

**Modern Medicine in the United States. Past Achievements and Solution of Present Day Problems** By S Adolphus Knopf, M D Octavo of 40 pages New York, The author, 1939 Paper

**Fundus Atlas Stereoscopic Photographs of the Fundus Oculi.** By Louis Bothman, M D ,

and Reuel W Bennett. Octavo of 50 pages, illustrated. Chicago, Year Book Publishers, Inc, 1939 \$17

**Manual of Fractures, Dislocations, and Epiphyseal Separations.** By Harry C W S de Brun, M.D Octavo of 457 pages, illustrated Chicago, Year Book Publishers, 1939 Cloth, \$3 00

**Nomenclature and Criteria for Diagnosis of Diseases of the Heart.** By the Criteria Committee of the New York Heart Association Fourth edition Octavo of 282 pages, illustrated New York, New York Heart Association, 1939 Cloth.

**Handbook of Orthopaedic Surgery** By Alfred R Shands, Jr, M D Second edition Octavo of 567 pages, illustrated St Louis, C V Mosby Co, 1940 Cloth, \$4.25

## REVIEWED

**The Clinical Diagnosis of Swellings.** By C E Corrigan, M D Octavo of 313 pages, illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$4 00

This book covers the important topics of general diagnosis of swellings. By means of clinical methods and physical signs the investigation is simplified in the diagnosis of tumors, cysts, ulcers, enlarged lymph glands, and swellings of the neck, breast, abdomen, joints, and inguinoscrotal regions. Clinical methods of inspection and palpation, which facilitate the interpretation of the pathologic process and aid in the differential diagnosis of swellings, are used to the exclusion of laboratory procedures to clarify the basic anatomic structural changes. The line drawings aid materially in correlating the clinical findings with the anatomic and pathologic processes caused by swellings. The book is well written and compact. It is recommended both to the clinician and to the surgeon as a convenient source of information for the differential diagnosis of regional swellings, diagnosis by clinical examination, and evaluation of physical signs.

IRWIN E SIRIS

**Moral Problems of Mental Defect.** By J S Cammack, S J Octavo of 200 pages New York, Benziger Brothers, 1939 Cloth, \$2 25

The subject matter of this book deals with various aspects of moral responsibility, a subject that in many of our courts has been the cause of prolonged medicolegal debates. The author first states the problem, offering some criticisms of the average book on the subject for not supporting statements with reliable research data. "The purpose of this thesis is to offer some material to remedy the deficiencies by collecting the facts ascertained by the best modern investigations of the subject of heredity, moral imbecility, and moral defect." While heredity is undoubtedly a potent factor, he draws attention to the difficulty of measuring the extent of its influence and separating the effect from that of environment.

Respecting moral imbecility the author says, "I have not been able to find, either in books or in practice, a case of one who is defective morally, that is, one sound in intellect who cannot form correct moral judgments."

The history of the development of the definition of moral defect seems to lead away from the notion that the moral imbecile is innately defective in morals and does not "support the view that a person can be sound in intellect and yet have no conscience."

Referring to the psychologic interpretation of moral defect, the author seems inclined to discard the tenets of the psychoanalytic schools in preference for a theory (Burt) of "temperamental defect" and "temperamental instability." The former refers to persons who, without being intellectually defective, exhibit from birth or an early age a permanent emotional instability. The latter refers to less severe cases. The book should stimulate much thought and should be a helpful addition to any library.

A E SOPER

**Sir Thomas Roddick His Work in Medicine and Public Life.** By H E MacDermot, M D Octavo of 160 pages, illustrated New York, Macmillan Co, 1938 Cloth, \$2 00

Dealing as it does with the life and achievements of Sir Thomas Roddick, an outstanding Canadian surgeon, this volume will find a ready audience among all Americans interested in Canada and things Canadian. Dr MacDermot has told this story in a clear and sympathetic manner, and as a student of Canadian medical history he is qualified for the task he has set himself. His book is worth reading.

GEORGE ROSEN

**Cancer Handbook of the Tumor Clinic of Stanford University School of Medicine** Edited by Eric Liljencrantz, M D Quarto of 114 pages, illustrated Stanford University, Stanford University Press, 1939 Cloth, \$3 00

This book is recommended as a necessary addend to the library of every practicing physician.

In spite of its brevity and outline form, it is remarkably complete. It clearly portrays the clinical picture of all forms of cancer, and stresses the essential differential diagnosis.

The treatment of cancer of various organs, surgery, irradiation or both, is so clearly stated that it leaves no doubt in the mind of the reader as to which method should be adapted.

HARRY MANDELBAUM

# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

### Plain Speaking

A lot of people, including minority groups within the profession, have claimed to represent the "average physician." Now the profession has spoken unmistakably for itself in *Modern Medicine's* poll. The results of this referendum establish beyond argument that an overwhelming majority of the nation's medical men favor the A M A program and oppose federalized medicine.

The returns appear even more conclusive when one examines the methods employed by *Modern Medicine* to obtain an honest and accurate cross section of professional opinion. The 20,215 ballots cast were far more than the number required for a Gallup poll. They have been analyzed on the basis of every factor which might conceivably influence medical views, e g , geographic location, income, nature of practice, length of time in practice, and membership in the A M A. Viewed from whatever angle, however, they point to one conclusion: the great majority of American physicians believe federalized medicine will result in a deterioration of professional service and will therefore refuse to "cooperate with a federally controlled program tending toward drastic curtailment of private practice."

The referendum asks four questions: (1) Do you approve the platform of the American Medical Association? (2) Specifically, do you favor local responsibility for the expenditure of public funds allotted to provide medical care for people who need it and can't afford it? (3) Would you cooperate with a federally administered and controlled legislative program tending toward drastic curtailment of the private practice of medicine? (4) Do you think such a program would result in a deterioration of the quality of medical service available to most people in the United States?

The unanimity of professional opinion on every one of these questions is impressive, to say the least. Eighty-five per cent of the



**Headache and Head Pains** A Ready Reference Manual for Physicians By Walton F Dutton, M D Octavo of 301 pages, illustrated Philadelphia, F A Davis Co, 1939 Cloth, \$4 50

Over two hundred affections causing headache of varying intensity are discussed in this work. The last section gives a list of remedies for headache and head pains. This is an interesting book, but it is difficult to see what is accomplished by enumerating so many causes of headache.

ANDREW M BABEY

**Proctology for the General Practitioner** By Frederick C Smith, M D Octavo of 386 pages, illustrated Philadelphia, F A Davis Co, 1939 Cloth, \$4 50

This book is presented by the author as a working guide for the general practitioner. He points out that the book is not intended for the rectal specialist, and intentionally covers the field tersely.

Although it is evident that the author makes every effort to omit controversial matter, his preference for the lithotomy position and general anesthesia in anorectal operations leaves room for debate.

The reviewer was very much impressed with the section on constipation. The chapter on parasites is excellent for reference purposes. The book is easily handled, the diction is excellent, and the printing all that could be asked.

A W MARTIN MARINO

**The Language of the Dream** By Emil A Gutheil, M D Octavo of 286 pages New York, The Macmillan Company, 1939 Cloth, \$3 50

This is an excellent book on dream analysis. Following the lead of Stekel, the author interprets dreams by the aid of symbolism. While recognizing the value of free association in dream interpretation, the author places the greatest emphasis on the symbolic significance in dreams. He thinks the free association method is too slow and indirect, while symbolism is a direct expression of the meaning of the dream. He admits that the free association method can be utilized in amplifying the symbolic method. He would begin the analysis by pointing out the symbolic value of the dream and end with free association.

Freudians believe differently about this. They would resort to symbolism when free association brings little of value. In other words, the various dream elements fail to arouse in the patient significant memories. The objection to the symbolic interpretation is that it assumes a general character suitable to all conditions and situations. The patient contributes almost nothing by way of understanding his neurosis. There is no effort required on his part—the meaning of the dream is handed down to him cut and dried. The patient is quite familiar with his past experiences, conscious or repressed, and symbolism is quite a strange language to him. Most people will require time to acquaint themselves with that mysterious lingo which has its origin in the prehistoric past.

JOSEPH SMITH

**Rural Medicine** Proceedings of the Conference held at Cooperstown, New York, October 7 and 8, 1938 (Mary Imogene Bassett Hospital) Octavo of 268 pages Springfield, Charles C Thomas, 1939 Cloth, \$3 50

This book contains a report on the proceedings of a conference held at Cooperstown, New York, October 7 and 8, 1938, among representatives in the fields of medicine, public health, and hospitals.

Of more than passing interest is the series of papers presented, entailing an analysis of the experience in a rural hospital. These papers serve the purpose of directing our thoughts to the vast wealth of material and experience in the hands of small local hospitals and practitioners of medicine among smaller units of population. Health department programs, postgraduate medical education, and economics of rural medicine are discussed both by specialists and by local representatives who are in close personal touch with problems in these fields. It is hoped that this publication is but the forerunner of many others covering the same field.

F L MOORE

**The Physiology of Exercise** A Textbook for Students of Physical Education By James H McCurdy, M D, and Leonard A Larson, B A Third edition Octavo of 349 pages Philadelphia, Lea & Febiger, 1939 Cloth, \$3 75

The third edition of this well-known book presents an excellent review of its subject matter. While it is primarily intended as a text for students of physical education, its broad scope and complete bibliography make it well worth the attention of those confronted in any way with the problems of physical activity in the broadest sense.

G B RAY

**The Natural History of Population** By Raymond Pearl Octavo of 416 pages New York, Oxford University Press, 1939 Cloth, \$3 50

This well-known author brings to us studies, based on scientific facts, regarding the probable trends of the important and much discussed problems of population. Generous support given to the work by the Milbank Memorial Fund of New York, has enabled the author to collect and analyze detailed individual reproductive life histories of 30,000 American women.

Using the 1937 series of the Heath Clark Lectures at the University of London as a basis, the author discusses broadly, from a wealth of documentation and bibliography, the major factors underlying the wide differences in human fertility and the relation of these factors to the world-wide decline in birth rate. He makes a definite study of the contraceptive efforts in the American population and gives a thorough discussion of the effects of contraception on natural fertility. The last section contains a marvelous historical discussion on world population, past, present, and future.

Those who are interested in the subject of the natural history of population in all its phases will find this volume most interesting and educational. The large amount of bibliographic material used as a basis for the book gives it a high standing as a scientific and reference work.

WM SIDNEY SMITH

to it in that it has caused many parents to become less concerned about the menace of diphtheria to their children. Unless constantly prodded, many would neglect immunization and the earlier prevalence of this disease would again assume alarming proportions.

Improvement in immunization procedures has progressed from the early use of toxin antitoxin administered for three doses at weekly intervals to three doses of diphtheria toxoid given a month apart. It is suggested that children be immunized at nine months of age and again given a single injection of toxoid before entering school. It has been the experience in large health centers that the alum precipitated toxoid causes more annoying local reactions than does the plain toxoid. The recommended dosage for the latter is  $\frac{1}{2}$  cc for the first injection, followed by two of 1 cc each in children under six years.

It is to the credit of the practitioner in private practice that a large share of this educational work in this field of preventive medicine has been carried out by him. However, neither he nor the health authorities can afford to lessen their efforts because of this brilliant achievement. To do so would be to invite the return of diphtheria in epidemic form.

### Why the Rush?

The advocates of compulsory health insurance are trying to secure legislative support before voluntary indemnity plans have had a chance to prove their worth. In Washington Senator Arthur Capper is sponsoring a measure drafted by the American Association for Social Security. Companion legislation has been introduced at Albany by State Senator Daniel Gutman and Assemblymen Wagner and Boccia.

Apparently these friends of state medicine are afraid to give the public an opportunity to see how effective self-help can be. Otherwise they would not ignore the recent report of the State Insurance Department. Commenting on the nonprofit hospital service and medical indemnity corporations now operating in the state, Superintendent Pink urged, "These corporations are at least worthy of experimentation before resorting to compulsory health insurance or state medicine. Voluntary action on the part of the people should be encouraged as much as possible and state aid should supplement self-help rather than supplant it."

The haste with which the advocates of obligatory insurance are seeking to entrench their system before "self-help," in the form of voluntary medical expense indemnity insurance, has had a chance to work, is understandable from the point of view of political expediency. If voluntary insurance proves satisfactory, there will be

nation's physicians, including nonmembers of the A M A , approve the latter's platform Eighty-eight per cent favor local responsibility for medical care and believe federal control would result in inferior service Eighty-five per cent would refuse to cooperate with a federal program threatening the continued existence of private practice

The strength of medical conviction on these issues is further shown by the fact that virtually the same percentages hold true for all groups within the profession, regardless of the basis of differentiation To take just one question as an example, 91 per cent of the country doctors and 85 per cent of the successful metropolitan specialists say that they would refuse to implement a plan for federalized medicine The same stand is taken by 81 per cent of the physicians in practice less than five years and 88 per cent of those in practice over 20, by 83 per cent of those earning less than \$4,000 a year and 87 per cent of those earning more, by 86 per cent of the members and 78 per cent of the nonmembers of the A M A

New York State, with 3,369 ballots, shows the greatest divergence from the general average Thus its 77 per cent vote in favor of the A M A program compares with a national average of 85 per cent, its 83 per cent endorsement of local responsibility with 88 per cent for the country as a whole Only 76 per cent of New York State voters believe federal control would cause a deterioration of medical service as compared to 88 per cent for the nation, and only 74 per cent (as compared to the general average of 85 per cent) would refuse to participate in a federalized medical system This divergence is largely due to the fact that New York State's returns are heavily colored by New York City, where sentiment for state medicine has always been stronger than elsewhere

Nevertheless, the preponderance of sentiment against federal control of medical care is strong and unmistakable even in New York City It should warn state and national legislators against the enactment of medical legislation which would not command professional support

### A Tribute to Perseverance

The success of the intensive educational campaign for routine diphtheria immunization of children is amazingly evident in the comparison of the statistics published by the New York City Department of Health for the years 1910-1919, and for the year 1939<sup>1</sup> In the former years, the average number of cases per year was 14,282, with 1,290 deaths, whereas in 1939, the total cases numbered 564 with 22 deaths This enviable record, however, has another side

<sup>1</sup> Quarterly Bulletin New York City Department of Health 8 No 1 7 (Feb) 1940

ner While our antagonists have been active for years, we have been so wrapped up in our individual problems that we were either blind or too self-satisfied to notice what was happening about us"—Excerpts from the report of the retiring president of the Erie County Medical Society, Dr Carlton E Wertz, quoted in that society's *Bulletin* for January

. . .

"A real or fancied crisis threatens and unless the profession realizes its own danger and voluntarily makes such changes in medical practice and procedure as seems more in accordance with present-day concepts, government agencies will interfere."—Dr John Finney, professor emeritus of surgery at Johns Hopkins made this crisp statement of fact in the foreword of Dr Bertram M Bernheim's book, *Medicine at the Crossroads*

. . .

"In many countries the introduction of socialized medicine has been the forerunner of religious intolerance, the suppression of free speech and the press, and the further development of centralized governments

"While our physicians and the church and community hospitals are developing methods and facilities to provide good medical care for those unable to pay and for those in low-income groups, the government is still collecting hidden taxes on the toast they eat, the braces they wear, and the medicine needed for their recovery

"The science of health is far in advance of the science of government, but medicine and government are not incompatible if used in the right proportions"—Dr Charles H Henninger, quoted in the St. Louis County Medical Society *Bulletin* for January 19, 1940

. . .

"The organized medical profession was confronted with the task of providing people with medical care dispensed according to the democratic principle of equal rights for all At the same time, it was confronted with the militant advo-

cacy, by various political and social welfare leaders, of federal control of medical care the government was urged by these self-appointed leaders to perform a similar function (similar to wartime control of industry) with regard to institutions which have to do with the public health

"The medical profession recognized this challenge to our democratic institutions It reiterated again and again the desirability of maintaining a democratic system of medical care. Furthermore, it recognized the value of community responsibility and management, factors in successful management of institutions, neglected until recently in the business world All of these principles, indispensable in a democratic system of medical care, were finally incorporated into a platform for the formation of a national health program

" However, we are living today in a war of ideas This war, which is being carried on in the press and over the radio, may be as destructive of individual rights, of existing institutions as a war involving armaments In this respect, the destiny of the organization of medicine is linked with the destiny of every other organization"—Mrs R E Mosman, chairman, Public Relations Committee of the Woman's Auxiliary to the A.M.A., in the January *Bulletin* of that organization

. . .

"The medical profession is not a trade union and is not especially concerned with the hours or place of work It does not build trusts or monopolies, excludes no qualified competitors and does not retain any worth-while discoveries for its own profit It does not specifically engage in political activities and calls no strikes It answers calls from the storm and wind-swept country, the streets of the village, the boulevards of the city, and the desolate fields of battle It demands that each physician meet the standards which equip him to render good medical care."—R B Poling, M D, president of the Mahoning County Medical Society, in the February issue of that society's *Bulletin*

no need for compulsory If there is no compulsory state insurance, a lot of political hangers-on will lose a glorious opportunity to batten at the public expense

The demand for compulsory sickness insurance is not a spontaneous, popular response to a pressing need but the artificial creation of a hungry political bureaucracy As Senator Burke of Nebraska told the Chicago Medical Society last December, "It has long been recognized that one of the greatest evils of a government bureaucracy is its tendency to perpetuate and expand its power "

Senator Burke said further "It is not strange that the American Medical Association has objected to health insurance with its regimentation of the medical profession to provide treatment in wholesale quantities The doctors are well aware that the treatment thus given in European countries that have health insurance is vastly inferior to that under our system of private practice, that the availability of health insurance in those countries has encouraged idleness of workers with minor ailments, that instead of improving the health of the people as a whole, the opposite has been true, and that far greater progress has been made in the United States without any system of subsidized medicine Unless the American form of government is to be gradually broken down, the United States should not tolerate a socialization of medicine "

There are strong medical, economic, political, and psychological arguments against compulsory sickness insurance More important, it stands condemned by experience Physicians should bring every ounce of their professional and political influence to bear in the fight against this destructive system

### Current Comment

"Doctors are short-lived Their average expectancy of life is the lowest of the professional groups They are valuable men in every community We are not sure there is anything we can do about this but recognize it—and appreciate it If socialized medicine and surgery becomes the rule, as some reformers would have it, we then would appreciate the family doctor"—From the Lapeer County (Mich ) *Press* a short time ago

"During the past several years, principally because of the depression and fomented by a group of political and social leaders, there has been going on a so-called social and economic change In

this picture health plays an important part and the promise of free medical care to the individual, who should realize that nothing in reality is free, by those fostering the so-called social security programs, gains many adherents for socialized medicine The fact that our health records are better than ever in spite of the depression

does not seem to mean anything to our agitators for socialization of medicine

"To the people as a whole, medicine and health are just a part of a large economic and social wheel We must so fit ourselves in the order of their lives as to regain their confidence and respect. We must show them that their interests are our interests and not in any selfish man-

# THE VALUE OF TUBERCULIN SKIN TESTS IN PEDIATRIC PRACTICE

PAUL W. BEAVEN, M.D., Rochester, New York

THE purpose of this paper is to evaluate the knowledge gained by the physician in private practice by a positive tuberculin test. It is my feeling that the test is of sufficient value to warrant its routine use by physicians whose work is among children. This is done in hospitals and clinics but is not, as a rule, practiced in offices. Its value is not only to determine whether the patient, himself, has primary tuberculosis but, perhaps even more important, to show that there is, or has been, in contact with this child someone who has the reinfection type of tuberculosis. It becomes the duty of the physician to locate that individual. By so doing, we make ourselves and our offices a clinical center for public health as far as tuberculosis is concerned.

## Pathogenesis of Primary Tuberculosis

A positive tuberculin test means the presence of primary tuberculosis, this and nothing else. Primary tuberculosis is the type of infection that predominates in childhood. It by no means is confined to children, however. It is clear that if only 15 per cent of the children at the beginning of adolescence possess positive tuberculin reactions and in adult life 30 per cent of the people possess a positive test, one-half of them contracted primary tuberculosis during adult life.

The pathogenesis of primary tuberculosis is well described by Wallgren<sup>1</sup>. He states that the tubercle bacillus in almost every case enters the body through the respiratory tract and lodges in an alveolus. One or more alveoli may be affected depending on the number of bacilli inhaled. From this original focus the organisms travel along the lymphatics to the tracheal nodes, from which in turn they are carried by the lymphatic ducts eventually

into the subclavian vein. It is probably true that in every case there is a bacillemia, and this accounts for lesions of the primary complex being set up in other parts of the body. Such secondary foci are most commonly found in the glands but may be in the pleura, the central nervous system, or the joints. This all may, and most frequently does, take place before the onset of the positive intracutaneous test.

As evidence of this early dissemination of the tubercle bacillus, Wallgren<sup>1</sup> reports that he has been able to demonstrate virulent tubercle bacilli in the gastric lavage of a child a week before the appearance of a positive tuberculin reaction. The primary foci in the lung or in the gland are surrounded by a wall of lymphocytes. In the center of this area caseation occurs. When the incubation period is over and the child is rendered allergic as shown by the presence of a positive skin reaction, then "a rather sudden and violent inflammatory reaction around the tuberculous focus takes place. This perifocal reaction consists of hyperemia with desquamation of alveolar cells, lymphocytic infiltration, and edema. This same reaction is produced in the lymphatic glands, which increase rapidly in size. At this stage of tuberculosis there is consequently often an extensive pulmonary lesion in the center of which lies a usually small caseous focus." The pathologic processes may completely resolve or may leave strands of fibrosis, or they may calcify and the calcified area inclose bacilli. If this enclosure is broken down by some means, then again we get a dissemination of the bacilli, now in a sensitized host, and reinfection type of tuberculosis occurs.

*Read at the Annual Meeting of the Medical Society of the State of New York  
Syracuse, April 26, 1939*

# SUGGESTIONS FOR CONTRIBUTORS TO THE NEW YORK STATE JOURNAL OF MEDICINE

The *New York State Journal of Medicine* asks its contributors to follow the suggestions listed below in the preparation of their articles. In this way they will greatly facilitate the expeditious publication of the JOURNAL. These suggestions have been devised in order to save correspondence, avoid return of papers for changes, minimize the work of preparation for the printer, and save the high costs of corrections made on galley proof.

**Size of Articles**—It is earnestly desired that scientific articles shall not exceed ten JOURNAL pages at the outside. Even that number of pages tends to lower reader interest. An average of five or six seems to be the most desirable from this point of view. Calculation can readily be made by multiplying the number of double spaced typewritten manuscript pages by the fraction two-fifths, e.g., twelve manuscript pages will make five JOURNAL pages.

**Manuscripts**—Papers must be typewritten on one side only of white sheets consecutively numbered, and be double spaced with one-inch margins. They should be prepared with great care so as to be typographically correct. All headings, titles, subtitles, and subheadings should be typed flush with the left-hand margin. This is imperative for rapid and accurate composition by the printers.

**Titles**—The title should be *brief* and typed in capital letters. The subtitle can be longer and should be typed in caps and lower case letters. Under the title, or subtitle, if there is one, should appear the name of the author and city in which he lives. Directly under his name should be the hospital or institution with which he is affiliated.

**Subheadings**—Subheadings should be inserted by the author at appropriate intervals.

**References**—It is the un failing practice of the *New York State Journal of Medicine* to use specific "references" rather than "bibliography." There should appear in the text reference numbers, typed above and to the right of the word to which there is a reference. A list, consecutively numbered, of these references should follow at the end of the manuscript. (Note that spelling in list is same as in text.) The arrangement should be as follows and should include all items

- a **Books**—author's surname followed by initials, title of book, edition, location and name of publisher, year of publication, volume, and page number. Thus, Osler, W. *Modern Medicine*, ed 3, Philadelphia, Lea & Febiger, 1927, vol 5 p 57

- b **Periodicals**—author's surname followed by initials, name of periodical, volume, page, month (day if necessary), year of publication. Thus, Leahy, Leon J. *New York State J Med* 40 347 (March 1) 1940

**NOTE** The JOURNAL does not include titles of articles.

**Case Reports**—Instead of abstracts of hospital histories, authors should write these reports in a narrative style with properly completed sentences. All unimportant details should be deleted with such general negative statements as fit the case.

**Tables**—While tables are very useful on lantern slides in the reading of papers, they fall of this purpose to a large extent in the printed page. For that reason it is urged that they be reduced as much as possible to descriptive language.

**Illustrations**—These should be kept to the minimum necessary to make clear the points to be registered by the author. In some instances they are imperative to proper understanding, in others they are merely picturesque. The latter can be excluded to good effect, both as to space and the not inconsiderable cost.

Where illustrations are to be used they should accompany manuscripts and each should always be referred to in the text, preferably by number. Drawings or graphs should not be larger than 12 × 16 inches, and must be made with jet black India ink on white paper or tracing cloth. *Do not use typewriter for lettering.* The smallest lettering on 8 × 10 inch copy should be no less than ¼ inch high. Cross section paper (white with black lines) may be used, but should not have more than 4 lines per inch. If finer ruled paper is used, the major division lines should be drawn in with black ink, omitting the finer divisions. In the case of finely ruled paper, only blue-lined paper can be accepted. Lettering and all markings must be large enough to be readable after reduction. Mail rolled or flat, never fold. Photographs should be very distinct and show clear black and white contrasts. They must be on glossy white paper. Avoid round and oval photographs.

Whenever possible "crop" photographs, i.e., mark portion that can be excluded when reproduced. Crop marks should be on *margin* of photographs. *Do not run pencil lines through photographs.*

It is important to mark the top of the illustration on the back, also its number as referred to in the text, thus, Fig 1, 2 and the name and address of the author.

*Legends* should be typewritten on one sheet of paper and attached to the illustrations.

made for that purpose, a decrease nearly approximating that found in Rochester

### Present Incidence of Primary Tuberculosis

Obviously, the significance of a test for a disease depends to some extent upon the incidence of the disease. In a report published in 1937 by the National Association of School Physicians,<sup>18</sup> a summary was made of the childhood tuberculosis surveys that had been made in the United States up to that time. In general, the conclusion was that the number of children infected was between 15 and 25 per cent. Some areas were more affected than others. The highest incidence of all was reported in Philadelphia<sup>19</sup> where in some districts it was as high as 72.6 per cent. In the state of North Carolina and some of the midwestern states it was below 10 per cent.

There have been some surveys among young adults. In 1937, Long<sup>20</sup> reported a survey in which he showed that in colleges in the midwest the incidence of positive tuberculin tests was approximately 20 per cent, in the east approximately 50 per cent, and in the far west approximately 40 per cent.

### The Cause of the Decline of Primary Tuberculosis

1 *Eradication of Bovine Tuberculosis*—Twenty years ago the number of cattle infected in this country was approximately 15 per cent.<sup>21</sup> In 1937, the National Livestock Exchange<sup>22</sup> published a map showing the incidence of bovine tuberculosis among the herds in the several counties and states in the United States. In only five states was the percentage higher than 3 per cent. In the remaining it was around 1 per cent or less. In many counties no tuberculosis at all was found in the cattle.

2 *Growth of Sanatoriums*—While the main object of sanatoriums is to treat tuberculosis, from the point of view of the community its chief value is that it isolates individuals who otherwise would be spreading the disease.

3 *Education of the Public by Private*

*Physicians*—People are being educated by means of magazine articles, talks by physicians interested in tuberculosis, and by conversations with physicians who realize its definite contagious nature and who give instruction in the technic of avoiding infection.

4 *The Surveys in Schools*—These are influential because they inform parents about tuberculosis. They often uncover otherwise unknown spreaders of the disease. They also give the older children the knowledge of the value of a periodic roentgen-ray examination.

5 *Less Crowded Living Conditions*—Since the advent of the automobile more people now live in outlying districts where they are more widely separated, and so tuberculosis is not scattered so much as it would be where people are crowded together in smaller quarters.

6 *Natural Immunity*—Immunity to tuberculosis is not inheritable, and yet Miller<sup>23</sup> points out there may be a capacity to develop resistance to tuberculosis which is inheritable. We know that there are always a certain percentage of people who are exposed to tuberculosis and do not get it. In the course of generations this percentage increases.

### The Virulence of the Tubercle Bacillus

In 1937 Rosenberg<sup>24</sup> stated that he felt there might be a variability in the virulence of the tubercle bacillus and that at the present time the lower death rate is due to the fact that the organism is in a lower phase. With this, others are in agreement. He pointed out that measles, whooping cough, and scarlet fever in a similar fashion have an increasingly lower mortality rate. There is a difference, however, between what is going on in tuberculosis and what is going on in measles, scarlet fever, and whooping cough, for there are just as many people infected and sick with these diseases as always.<sup>25</sup> The mortality only has gone down. In tuberculosis the incidence, morbidity, and mortality are all going down at the same time. This phenomenon is illustrated by the figures presented for Rochester during the years 1925 to 1934.<sup>17</sup>



Primary tuberculosis is probably one of the best examples of allergy. The original deposition of the bacillus within the alveolus is frequently accompanied by areas of edema within the pulmonary or glandular tissue. This is undoubtedly evidence of allergy. The tuberculin reaction itself is also evidence of allergy. More recently this has been demonstrated by Sabin.<sup>2</sup> The reaction of the body is changed by the advent of allergy, for without allergy the disease is innocuous, in the presence of allergy it produces clinical tuberculosis. Erythema nodosum is an evidence of allergy. This has been shown by the work of Wallgren,<sup>3</sup> Ernerberg,<sup>4</sup> and Dickey.<sup>5</sup> Phlyctenular conjunctivitis has been shown by Goldstein<sup>6</sup> and Burgin<sup>7</sup> to be an evidence of sensitivity to tubercle protein. While both of the latter conditions may rarely occur in diseases other than tuberculosis, when they do occur as a part of the tuberculous infection they are signs of allergy. Occasionally, primary infection is associated with joint swellings, and as Wallgren<sup>3</sup> has pointed out, this is an allergic response to tubercle protein.

Primary tuberculosis is never a localized disease. The onset of the infection is associated with tubercle dissemination. We cannot speak correctly of tuberculous adenitis or tuberculous meningitis or even of bone tuberculosis. These are a part of a general infection which was originally pulmonary. Friedman,<sup>8</sup> Poulson,<sup>9</sup> and others have been able to demonstrate bacilli in the lavage of children who have no evidence of tuberculous infection save the allergic response. Wallgren<sup>3</sup> has found bacilli in children who have no evidence of tuberculosis except a positive tuberculin and Erythema nodosum. Poulson<sup>9</sup> reports that at the Finzen Institute one-third of the cases of bone tuberculosis had tubercle bacilli in their gastric lavage.

### The Symptoms of Primary Tuberculosis

In general, it is true that there are no symptoms of any toxic nature at the onset of primary tuberculosis. Wallgren<sup>1</sup> observed 100 cases that developed a posi-

tive tuberculin under his observation. All of them had a mild fever. This observation is corroborated by Martin.<sup>10</sup> She, however, states that when the pulmonary infiltration is very large, then the fever is higher and lasts longer, but at no time, even with huge pulmonary involvements, are the children toxic. This is in contradistinction to pulmonary infiltrates of known nontuberculous origin. These observations are corroborated by Dickey,<sup>11</sup> Dunham,<sup>12</sup> and Reichle.<sup>13</sup> The fever may last for only a few days to a number of weeks, generally dependent upon the amount of pulmonary involvement.

### The Signs of Primary Tuberculosis

Smith<sup>14</sup> made a study of the white blood cells in children with primary tuberculosis. His conclusion was that in some cases a slight lymphocytic increase occurred, but he did not feel that it was diagnostic.

Friedman,<sup>8</sup> Wallgren,<sup>1</sup> and others have made note of the fact that the sedimentation rate was prolonged during the febrile stage of primary tuberculosis.

Bumbalo<sup>15</sup> has noted that the vitamin C excretion is low in primary tuberculosis.

The foremost sign, however, of primary tuberculosis is obtained by the roentgen ray. The presence of calcification in the lung or glands is almost always diagnostic of the primary complex. Consolidation in the lung demonstrated by the roentgen ray in a child with a positive tuberculin test is highly suggestive of primary tuberculosis if the infiltration persists with little or no toxicity and only slight fever. This point is illustrated by many examples by Martin<sup>10</sup> and Taylor.<sup>16</sup>

### The Trend of Incidence of Primary Tuberculosis

In 1935 it was shown that in Rochester, New York, the incidence of primary tuberculosis had decreased 62 per cent in the preceding ten years.<sup>17</sup> In that report reference was made to a number of surveys that had been made elsewhere. It was pointed out that these surveys demonstrated, though not specifically

case of tuberculosis as we are in finding the child who has been infected

There are factors that are involved in finding a positive test other than diagnosis. One of these is the size of the reaction. Lincoln<sup>36</sup> says that it was her observation that there is no significance in the size of the tuberculin test as far as it relates to the size of the tuberculous lesion, the activity of the disease, or its general prognosis. Boyd<sup>37</sup> disputes this. He found in the schools in Vancouver that those children who gave the highest allergic response were in general those children in closest contact with tuberculosis at home. Among those children who gave only a slight response it was almost invariably impossible to find the source of contact. In general, however, workers agree with Lincoln's conclusion.

There has been, until recently, a universal feeling that the presence of a positive tuberculin connotes immunity to tuberculosis of the reinfection type. This belief is still widely held. However, I think it is fair to say that almost any physician whose chief interest is in tuberculosis considers a positive tuberculin under the ninth or tenth year as a liability.

Hill<sup>38</sup> goes further than this and states "A positive tuberculin test in a child can no longer be held as an advantage, as an indicator of immunity. Nor can it be held a liability to reach adult age with a negative tuberculin." Chadwick<sup>39</sup> says "There is without doubt a small immunity conferred by an infection with the tubercle bacillus, provided it is not excessive, and the child has an average amount of resistance. However, it is important to remember that this immunity cannot be depended upon to prevent disease."

#### Significant Factors in the Development of the Reinfection Type of Tuberculosis

Probably the greatest factor in the onset of the reinfection type of tuberculosis is continuity of contact. Opie<sup>40</sup> states that children who have primary tuberculosis and then are exposed continuously have five times the chance of

developing reinfection tuberculosis than those whose contact is broken. Debre<sup>40</sup> analyzed 171 infants who had a positive tuberculin test and were separated from the source of contact. In four years, 7.6 per cent of these children had died of tuberculosis. Sixty-six children were infected and continued to live in the same environment, and in four years 82 per cent of them had died of tuberculosis. So important is it that a person who has primary tuberculosis be kept away from the bacillus that Weintraub<sup>41</sup> has said that the whole problem of childhood tuberculosis is removing children from their contacts.

Age is a factor. The acute reinfection type of tuberculosis develops from the primary infection most often in the first two years of life. It is then that tuberculous meningitis and miliary tuberculosis are most common. Wallgren<sup>1</sup> and Nobecourt<sup>42</sup> have also pointed out that this type of acute reinfection tuberculosis develops within a few months after the onset of allergy. The onset of the reinfection type of tuberculosis is influenced for some reason by the development of maturity. Above the age of 15 the mortality from the reinfection type begins to mount. Why this should occur is not entirely clear.

Certain nontuberculous diseases seem to light up primary tuberculosis and induce the reinfection type. This is true of measles. In a recent article written by Kohn,<sup>43</sup> he comes to the conclusion, after studying children with primary tuberculosis who had had an attack of measles, that that disease would in some cases induce the onset of the reinfection type of tuberculosis.

Wallgren<sup>1</sup> modifies this somewhat by stating that there is no danger from measles providing the primary infection is not a fresh one. In going back and analyzing Kohn's figures in the light of this observation, it is also true in his series.

Finally, as Miller<sup>23</sup> points out, fatigue may determine whether or not the reinfection type develops upon the primary

This observation was also corroborated by the work of Harrington<sup>26</sup> in Minnesota where he found in 1937 that during the preceding ten years there was a drop of approximately 70 per cent in primary tuberculosis. During the same period, Boynton<sup>27</sup> noticed a drop of 72 per cent in the mortality from tuberculosis. In 1937 Frost<sup>28</sup> stated that the curve showing childhood incidence and the curve showing mortality from tuberculosis were the same. Potter<sup>29</sup> in 1937 stated that the curves of mortality and morbidity were going down at the same rate. The conclusion we can draw from these several comments is that the number of people who are infected with tuberculosis, the number of people who are sick with tuberculosis, and the number of people who die from tuberculosis are diminishing at the same rate. This is not true of the other diseases which we have mentioned which are common to childhood. In 1938 Drolet<sup>30</sup> published the startling fact that *relative* mortality from tuberculosis was going down but little. In spite of modern treatment of tuberculosis, the death rate in the sanatoriums of the United States was actually slightly increasing. In 1925 the death rate was 20 per cent, in 1931, 23 per cent, and in 1934, 24 per cent. There must be involved in these statistics factors other than those that appear at a superficial glance, but it certainly would not leave one with the conclusion that the virulence of the tubercle bacillus is decreasing. I think we can conclude with Frost<sup>28</sup> that the specific properties of the tubercle bacillus have not changed appreciably in modern times.

### The Significance of a Positive Tuberculin

The first significance of a positive tuberculin reaction is to the patient himself. Myers<sup>31</sup> gives some interesting data. He reports on a large group of children whose average age was 8 years and who had positive skin tests. These children were followed for fourteen years. A similar group who at the onset did not have positive tuberculin tests were also

followed as a control. At the end of the period there was eight times as much clinical tuberculosis in the group with positive tests as in the group with negative tests. In another communication, Myers<sup>32</sup> states that in a group of children very carefully studied, it was shown that those who have evidence of calcium deposits in the lung parenchyma, the lung hilum, or both are five times more likely to fall ill from clinical disease during the teen-age period than those children who react positively to the test and have no roentgen-ray manifestations at the time. In a study published in 1939 by Ch'iu,<sup>33</sup> he reports 446 children whose average age was 7 years when they were first known to have a positive tuberculin. This group was well controlled and was followed for ten years. At the end of this period 15 per cent had clinical tuberculosis, and of the controls only 1.7 per cent had clinical disease. The ratio of the mortality was even more striking which was 38 to 1 for the positive reactors. Opie<sup>34</sup> states that 75 per cent of the children in the teen ages who develop tuberculosis are recruited from the ranks of those who developed their positive tuberculin in early childhood.

Of equal significance in finding a positive tuberculin test is its community interest. Each case of tuberculosis prevented represents a saving of \$4,000, which is an estimation published in a report from the State Board of Health.<sup>35</sup> There is no estimate of the amount of sickness and death which is prevented by finding the person who is spreading tuberculosis. In a case where a positive tuberculin exists in a child, both parents and siblings should have tuberculin tests. The maid, the nurse, the cook, or any other person who is intimate with the child should have a skin test. If it is positive, they should have a roentgen and physical examination. Any physician who has practiced very long has seen cases of primary tuberculosis which have been caused by contact with a maid or a nurse who possessed the reinfection type of the disease. We should be as earnest or perhaps more earnest in finding the adult

## Discussion

Dr Fairfax Hall, *New Rochelle, New York*—I am sure all of us agree heartily with everything Dr Beaven has brought out in his paper. It should leave us with a slogan for every child with a positive tuberculin reaction of "Find the Source and Break the Contact." Also it should encourage us to do tuberculin tests as routinely as Schick tests and at more frequent intervals.

One of the reasons tuberculin testing has not been done more often in pediatric practice is because it has meant one more painful procedure which a pediatrician has to live down in order to keep on friendly terms with a child and the family.

The patch test of Vollmer is a method which eliminates all discomfort from tuberculin testing. It is sufficiently accurate to be of value and so easy to do that it can be used routinely on every child and repeated frequently. Because of having found 1 case in which the patch test was negative and the intradermic test positive, I am inclined to check up a negative patch test with a Mantoux test if there is any suspicion that the former may be wrong. The patch test appears to be slightly less sensitive than a 1 to 1,000 intradermic test and distinctly less so than 1 to 100 or 1 mg.

A practical point to be considered in purchasing a supply of patch tests is to buy in lots of one hundred and not of ten. At the current price it is about one-third as expensive per test when bought in the larger quantity.

I would like to recommend for intradermic use a most convenient and inexpensive preparation. It is the one which is prepared and sold by the New York City Department of Health Laboratories. This was ingeniously thought out by Dr Charles Hendee Smith.

There is much more that can be said with regard to tuberculin testing which perhaps Dr Beaven will care to go into. One thing I would like to hear him discuss is the use of PPD tuberculin, also how long it is advisable to keep solutions of old tuberculin after they have been made up in dilutions of 1 to 1,000 or 1 to 100. I believe that such dilutions when kept in a refrigerator are good for a long time. (Use after seven years was reported with little loss of strength.)

A second reason tuberculin tests have not been made more frequently on children has been the question, "What are we going to do about it if it is positive?" We already try to keep our patients in a state of health calculated to produce maximum resistance against the progress of infection. Dr Beaven has given us one answer to this, which is, the benefit to the child and to the

community by finding the source from which the child has acquired the tuberculous infection.

I should like to go even further than Dr Beaven by recommending prevention or postponement of a positive tuberculin reaction, by avoiding the primary tuberculous infection of a child. There is a development, of importance in preventive pediatrics, designed to achieve this ideal by keeping tuberculous adults out of the nursery and out of the schools.

The American Academy of Pediatrics is back of a program to educate doctors, the public, and school boards concerning the value and necessity for periodic medical examinations of all persons who are in close association with children. This applies to parents and relatives, to schoolteachers, and especially to nursemaids and housekeepers who take care of children. These examinations must exclude the existence of tuberculosis by tuberculin tests and x-rays. Every pediatrician would do well to recommend to the families in which he looks after the children, that all domestic workers who are in contact with children must furnish a health certificate. This certificate or "health reference" should be the result of having undergone an examination that has definitely ruled out pulmonary tuberculosis which is open or may become so.

There are now committees, in forty states, consisting of pediatricians who are members of the Academy. Arrangements are being made by them throughout the country so that examinations may be obtained at moderate cost for servants, schoolteachers, and parents. Every pediatrician should set the example by having such an examination himself.

Dr H. F. Rowley, *Rochester, New York*—For many years as an intern and resident on pediatric services I was impressed, as all of you have been, with those hopeless cases of the reinfection type of tuberculosis occurring in babies and children apparently in perfect health. Feeling convinced that such cases could and should be prevented, I have, since entering private practice, made a routine procedure of doing my first tuberculin test at the age of three months, then repeating the test each year thereafter at the time of the yearly medical check-up.

Because advanced tuberculosis or the reinfection type of tuberculosis in children is simply an indication of an earlier infection, I feel we are confronted with the necessity of recognizing the disease at its very earliest stage, then determining the source of the infection, disposing of the source by isolation, and following our positive tuberculin cases carefully and intelligently throughout the following years. The fact that the tuberculin

infection This is especially true in young adults

### Treatment of Primary Tuberculosis

When the child has enlarged noncalcified hilar glands or where there are pulmonary infiltrations, whether there are symptoms or not, such a child should be given complete bed rest. He should stay at rest until the glandular swelling has become calcified and the pulmonary infiltration is completely resolved. He should be given milk in abundance, theoretically important because of the calcium intake. He should be given cod-liver oil, for it aids in the deposition of calcium. He should be given orange juice—important for its vitamin C content. He should be given periodic roentgen-ray examinations, at least annually until the onset of puberty and oftener at that time if so indicated. Let it be emphasized that the most important form of treatment is to separate the child from the source of contact. Everything else is secondary to this.

### Conclusions

1 The children's physician should routinely perform tuberculin tests. He should be a center of influence in the antituberculosis program.

2 A positive tuberculin in a child signifies the presence of primary tuberculosis. Because it is from such children that clinical tuberculosis is chiefly recruited, these children should be watched carefully during childhood, but more especially during the teen ages. It is at this time that reinfection type of tuberculosis becomes a factor.

3 The decline in tuberculosis is not due to loss of virulence in the organism. The chief factor in its decline is probably the isolation of those who are contagious.

4 The presence of a positive tuberculin test in a child means the presence of some immunity, but this immunity is not enough to prevent disease in later life.

5 The goal of every physician interested in the tuberculosis problem in children should be to prevent primary infection.

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# DIET AND DEFICIENCY DISEASE IN CLINICAL MEDICINE

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DEFICIENCY disease may be defined as a morbid condition resulting from deprivation of certain specific substances essential for normal physiologic function and for normal anatomic structure. These essential substances fall into three classes: the amino acids of biologically complete protein, mineral salts, and vitamins. It is possible that certain specific fatty acids should likewise be included within this group. Thus, rickets, iron-deficiency anemia or chlorosis, scurvy, pellagra, and beriberi, may be cited as familiar illustrations which have attained the dignity of specific nomenclature. Clinical and experimental work, however, are rapidly broadening the perspective of this problem. Certain signs and syndromes are being recognized as the effects of less well-known deprivation. Moreover, the concept of deficiency disease itself is changing. Originally conceived as the expression of improper diet, it is now known to result as well from defective absorption occurring in certain diseases of the gastrointestinal tract and from primary physiologic failure as in the loss of gastric intrinsic factor in pernicious anemia. Deficiency disease is therefore further qualified by the terms primary, indicating origin from a defective diet, or secondary or conditioned, indicating a fundamental physiologic failure.

It is manifestly impossible to consider the entire field of deficiency disease in this discussion. Therefore, it will be limited principally to a consideration of the primary and secondary vitamin deficiencies in relation to the practice of medicine. The vitamins thus far shown to be necessary in human nutrition are A, thiamin, riboflavin, nicotinic acid, B<sub>6</sub>, C, D, and K.

Although present concepts of the pathology of the avitaminoses are largely based upon studies of experimental animals, certain of the morbid changes have been observed in man.<sup>1</sup> Clinical studies likewise demonstrate that avitaminosis is accompanied by anatomic change and by perversion or loss of function of certain tissues.

Vitamin A appears to be formed in the liver from alpha, beta, and gamma carotene and cryptoxanthin contained in the normal dietary. Lesser grades of deficiency of this substance have been shown to produce nyctalopia or night blindness, progressing to xerophthalmia in the presence of extreme deprivation. Likewise, certain types of hyperkeratosis of the skin occur which appear to depend upon lack of this vitamin. In experimental animals the pathology of avitaminosis A is well established. The essential function of vitamin A is maintenance of specialized epithelial surfaces. Deprivation produces epithelial deterioration followed by metaplasia affecting the cornea, the respiratory and gastrointestinal mucosa, and the skin. Atrophy occurs in the growing long bones with cessation of growth. Differentiation of cartilage ceases, osteoid tissue is scanty, and both cartilage and bone become densely calcified. Atrophy and metaplasia of the enamel organ of the teeth occur.

Vitamin B, originally believed to be a relatively simple substance, has been shown to comprise at least four specific fractions that are essential for normal human nutrition: thiamin, riboflavin, nicotinic acid (amide), and B<sub>6</sub>.

Thiamin, vitamin B<sub>1</sub> or the antineuritic vitamin, is intimately associated with the disease beriberi and with certain forms

test is so fundamental in recognizing the early invasion period in infants and children as well as adults makes it an inexpensive, easy, and necessary means for detection, investigation, and prevention of the reinfection type of tuberculosis.

There are three definite sections of our population benefited by detecting the early cases of tuberculosis viz, the patient, the family, and the community, as has been emphasized by Dr Beaven. The main responsibility to each of these groups is to determine the source of the infection and, by means of isolation and sanatorium treatment, prevent its spread to other members of the family and community. In infancy and childhood there is little or no economic problem other than the routine medical supervision. However, in the positive tuberculin group and those with the reinfection type of tuberculosis as found in high-school and college students we are confronted with the medical, economic, social, and psychologic factors. At this particular period it is our duty to prevent the young adult from excesses which might jeopardize his future health.

The finding of positive tuberculin tests on children in any family may be the means of detecting cases of active tuberculosis at a very early period, thereby preventing the economic disaster and social stigmata to the family associated with hospitalization of one or more members because of the reinfection type of tuberculosis.

In spite of the very small percentage of positive tuberculin infants and children in my group of 769 tuberculin tests, I am still convinced that it is a worth-while routine procedure in our office

practice. We cannot evaluate from a statistical point of view the quality of preventive medicine practiced until we have discovered tuberculosis where it has never been suspected.

In this group there are 15 positive tuberculin cases. At least one tuberculin test was done on each of 769 infants and children. In less than half of the 1,500 cases no tuberculin was done mainly because patients were seen only once and in many cases they returned to their family physician for future care. One hundred and forty-three children had a second tuberculin, 74 had a third, 49 had a fourth, 18 had a fifth, and 6 had a sixth. Some of these tests were repeated each year, and others at longer intervals depending upon the time the patients returned.

It is interesting to note that, in a few cases, intelligent parents refused permission for the tuberculin test. In the group of 15 positive tuberculin cases only 3 gave a family history of the disease, 4 cases showed positive tuberculosis by x-ray as shown by calcification. In 2 cases the tuberculin was repeated on four different occasions at yearly intervals showing a positive reaction each time. In 1 case the tuberculin was negative, then positive, then negative again on two successive occasions. Another baby, born to a mother with inactive tuberculosis, had a negative tuberculin test at birth, a second negative test at three months, and a very positive test at the age of six months. Both mother and baby are at the present time under sanatorium treatment. In another child, aged 7½ years, whose mother had active tuberculosis, we found only a suspicious chest plate.

## AMERICAN BOARD OF OBSTETRICS AND GYNECOLOGY EXAMINATIONS

The general oral and pathologic examinations (Part II) for all candidates (Groups A and B) will be conducted by the entire Board at the Atlantic City Hospital, Atlantic City, New Jersey, from Friday, June 7, through Monday, June 10, 1940, prior to the opening of the annual meeting of the American Medical Association in New York City on Wednesday, June 12, 1940. Candidates are requested to note that the dates of the examinations have been advanced one day from those previously announced.

Application for admission to Group A, Part II, examinations must be on file in the Secre-

tary's Office not later than March 15, 1940. Formal notice of the time and place of these examinations will be sent each candidate several weeks in advance of the examination dates. Candidates for re-examination in Part II must make written application to the Secretary's Office before April 15.

The annual dinner of the Board will be held in New York City on Wednesday evening, June 12, 1940, at the Hotel McAlpin. For further information and application blanks, address Dr. Paul Titus, Secretary, 1015 Highland Building, Pittsburgh (6), Pennsylvania.

Unappeased hunger, says a Chicago physiologist, is a significant factor in dangerous driving. Not to mention a satisfied thirst—*Des Moines Register*

Some pay their dues when due,  
Some when overdue,  
Some never do  
How do you do?—*The Rainbow*

caloric value of the diet is derived from sugar and four-fifths from foods that have lost much of their vitamin potency and ash content in various refining processes. It is not generally appreciated that oleomargarines prepared from animal fats contain no vitamin A since the Bureau of Animal Industry prohibits the addition of this substance.

Nutrition surveys, although indicating that defective diets are not uncommon in certain groups of the population, do not attribute great importance to these deficiencies. Thus, Stiebling<sup>12</sup> in an analysis of workers' dietaries found significant deficiencies only in the lowest income group. A recent report of the Council on Pharmacy and Chemistry and the Council on Foods of the American Medical Association<sup>13</sup> states "with the exception of pellagra and a possible vitamin B<sub>1</sub> deficiency there is no evidence of a noteworthy prevalence in this country of conditions in adults that might properly be ascribed to a lack of one or more vitamins." However, they further state that the optimal diet should contain more vitamins A, B, C, and in certain parts of the country more riboflavin and more nicotinic acid. It seems probable that vitamin D should be included in this list especially during the winter months and for urban dwellers who have limited exposure to active sunlight.

It is important to point out certain sources of error in the evaluation of dietary adequacy even for the healthy individual. The actual requirements for the specific vitamins are unknown. The recommended amounts are the assumed minima plus an addition to provide a factor of safety.<sup>14</sup> The requirements of the growing child undoubtedly are higher than those of the adult, and pregnancy likewise creates an increased demand. Furthermore, evaluations of diet are computed on the basis of the average values of the raw untreated foods and not of the "as-served" foods. The results obtained do not reflect loss of potency due to unfavorable storage conditions or improper methods of preparation. Thus, storage of orange juice overnight at ice-

box temperature results in large reduction of the vitamin C content. Cooking with soda produces significant loss of thiamin, and rapidly destroys vitamin C. Home-canned or dried fruits and vegetables contain little or none of this vitamin. Furthermore, boiling of vegetables extracts considerable amounts of the water-soluble vitamins that are lost if the water is discarded.

However, we are primarily concerned with the incidence and possible significance of vitamin deficiencies in medical practice. Clinical data indicate that these are not uncommon. So-called sub-clinical deficiencies are considered to give rise frequently to a syndrome resembling neurasthenia.<sup>15</sup> This is characterized by a variety of vague complaints including anorexia, weight loss, asthenia, indigestion and dyspepsia, constipation or attacks of diarrhea, paresthesias, nervousness, apprehension, depression, insomnia, and irritability. Likewise, there is evidence that a variety of neurologic syndromes are accompanied by lesions similar in character, often widespread, that are attributable to defective dietary. A recent reviewer<sup>16</sup> has said "The lesions of the nervous system which are common in beriberi, pellagra, Korsakoff's syndrome, and pernicious anemia, as well as those found in many cases of combined degeneration of the cord, in Landry's paralysis, and in polyneuritis associated with a great variety of morbid conditions, are traceable to deficiency of diet or to conditions that interfere with utilization of factors contained in food which has been ingested." And further, "Neurologic lesions caused essentially by deficiency are usually traceable to lack of a part or parts of the vitamin B complex or of something contained in liver." In the light of present knowledge these substances include thiamin, nicotinic acid, riboflavin, and vitamin B<sub>6</sub>.

Clinical studies have yielded information that permits the tabulation of certain physical signs and symptoms that should lead one to suspect the presence of a deficiency state.

In addition to night blindness, insuffi-



of peripheral neuritis The clinical syndrome of thiamin deficiency is characterized by anorexia, fatigue, neurologic and circulatory phenomena<sup>2,3</sup> Reflex and sensory changes occur predominantly in the lower extremities, and in the gastrointestinal tract, achlorhydria, hypomotility, and atony The lesions resulting from deprivation of this substance are somewhat uncertain Patchy myelin degeneration in peripheral nerves, degeneration of Auerbach's plexuses, and focal degenerative lesions in the cerebrum and pons have been attributed to deficiency of this substance

The status of riboflavin in human nutrition is less well defined at present It appears to be of use in the treatment of certain of the phenomena of pellagra although this is not fully established Sebrell and Butler,<sup>4</sup> however, have reported the experimental production of cheilosis in man, maceration and fissuring at the angles of the mouth, which responded to the exhibition of synthetic crystalline riboflavin

Nicotinic acid (amide) originally found to be curative for experimental "black-tongue" in dogs<sup>5</sup> was then found to be specific for endemic pellagra<sup>6,7,8</sup> In appropriate dosage it causes the gastrointestinal and dermal lesions to disappear There is return to normal of the porphyrin and porphyrin-like pigment excretion in the urine and profound improvement in the mental symptoms of the disease

Vitamin B<sub>6</sub>, first shown to be an important nutritional factor for young rats and puppies, may have a definite place in the therapy of pellagra particularly for the relief of certain muscular and neurologic symptoms<sup>9</sup> While its physiologic action and the pathologic effects of deprivation still remain to be proved, it has been suggested that its function is related to the utilization of unsaturated fatty acids<sup>10</sup>

Scurvy, long recognized as a dietary deficiency disease, is the clinical expression of vitamin C (ascorbic acid) deprivation The essential pathologic lesion of this deficiency is the inability of supporting tissue to produce and maintain

normal intercellular substances Characteristically this results in weakening of blood-vessel walls, increased capillary fragility, and hemorrhage In the experimental animal, deficient supply of this vitamin likewise is accompanied by definite abnormalities of tooth formation Odontoblasts are replaced by osteoblasts with production of bone instead of dentine, and there is fibroid degeneration of the dental pulp

Vitamin D occurs naturally in two forms one of which is identical with the vitamin D produced by the irradiation of ergosterol It is intimately related to the absorption and utilization of calcium and phosphorus Insufficient supply during the growth period results in rickets In addition to the characteristic bone lesions, dental defects occur in the experimental animal maintained on a rachitic diet The teeth erupt late, and are irregularly set, the enamel is of poor quality, and the jaw bone is spongy There is clinical evidence that vitamin D also plays an important role in tooth formation and the maintenance of normal tooth structure in man

A second antihemorrhagic factor, vitamin K, is now recognized It is an oil-soluble substance requiring the presence of bile salts for absorption from the intestine It functions to maintain normal plasma prothrombin concentrations and normal clotting time Clinically important deficiencies of this vitamin are particularly prone to occur in the presence of jaundice

It is evident even from such a superficial scrutiny of the physiologic and pathologic effects of vitamin deprivation that deficiencies of these substances may contribute importantly to human disease and chronic states of ill health How commonly do such deficiencies occur? Although no specific answer can be given as yet, there is a growing suspicion that the average American dietary is more defective than is commonly believed It is said<sup>11</sup> that the average protein intake has decreased from 100 grams to from 50 to 60 grams per diem in a generation Approximately one-fifth of the present

caloric value of the diet is derived from sugar and four-fifths from foods that have lost much of their vitamin potency and ash content in various refining processes. It is not generally appreciated that oleomargarines prepared from animal fats contain no vitamin A since the Bureau of Animal Industry prohibits the addition of this substance.

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It is important to point out certain sources of error in the evaluation of dietary adequacy even for the healthy individual. The actual requirements for the specific vitamins are unknown. The recommended amounts are the assumed minima plus an addition to provide a factor of safety.<sup>14</sup> The requirements of the growing child undoubtedly are higher than those of the adult, and pregnancy likewise creates an increased demand. Furthermore, evaluations of diet are computed on the basis of the average values of the raw untreated foods and not of the "as-served" foods. The results obtained do not reflect loss of potency due to unfavorable storage conditions or improper methods of preparation. Thus, storage of orange juice overnight at ice-

box temperature results in large reduction of the vitamin C content. Cooking with soda produces significant loss of thiamin, and rapidly destroys vitamin C. Home-canned or dried fruits and vegetables contain little or none of this vitamin. Furthermore, boiling of vegetables extracts considerable amounts of the water-soluble vitamins that are lost if the water is discarded.

However, we are primarily concerned with the incidence and possible significance of vitamin deficiencies in medical practice. Clinical data indicate that these are not uncommon. So-called sub-clinical deficiencies are considered to give rise frequently to a syndrome resembling neurasthenia.<sup>15</sup> This is characterized by a variety of vague complaints including anorexia, weight loss, asthenia, indigestion and dyspepsia, constipation or attacks of diarrhea, paresthesias, nervousness, apprehension, depression, insomnia, and irritability. Likewise, there is evidence that a variety of neurologic syndromes are accompanied by lesions similar in character, often widespread, that are attributable to defective dietary. A recent reviewer<sup>16</sup> has said "The lesions of the nervous system which are common in beriberi, pellagra, Korsakoff's syndrome, and pernicious anemia, as well as those found in many cases of combined degeneration of the cord, in Landry's paralysis, and in polyneuritis associated with a great variety of morbid conditions, are traceable to deficiency of diet or to conditions that interfere with utilization of factors contained in food which has been ingested." And further, "Neurologic lesions caused essentially by deficiency are usually traceable to lack of a part or parts of the vitamin B complex or of something contained in liver." In the light of present knowledge these substances include thiamin, nicotinic acid, riboflavin, and vitamin B<sub>6</sub>.

Clinical studies have yielded information that permits the tabulation of certain physical signs and symptoms that should lead one to suspect the presence of a deficiency state.

In addition to night blindness, insuffi-

TABLE 1—VITAMIN SOURCES

Vitamin	Daily Requirement	Best Sources	Destroyed By
A	3,000 units?	Carotene, milk, butter, eggs, colored vegetables	Fermentation, oxidation
Thiamin B <sub>1</sub>	1-2 mg?	Brewer's yeast, wheat germ, rice polishings, spinach, carrots, tomatoes, lettuce	Heat and alkali loss by soaking
Riboflavin	400-600 units?	Liver, egg yolks, milk, yeast, wheat germ, kale, spinach	Ultraviolet irradiation
Nicotinic acid	?	Milk, lean meats, liver, yeast, spinach, other green vegetables	relatively stable
B <sub>6</sub>	?	?	?
C (ascorbic acid)	40 mg? 60 cc. orange juice	Citrus fruits, fresh vegetables, canned or frozen vegetables	Cooking with alkali
D	135-1,200 units?	Fish liver oils, oysters, irradiated milk, 135 units metabolized milk, 400 units	
K	?	Kale, spinach, tomatoes	

cient supplies of vitamin A are believed to produce patches of cornified epithelium in the canthi of the eyes, Bitot's spots, corneal pigmentation, dryness and scaliness of the skin, loss of hair, and follicular hyperkeratosis of the skin over the thighs and forearms. Thiamin deficiency early is accompanied by anorexia and paresthesias. Calf muscle tenderness and plantar hyperesthesia develop. Vibratory sensation is diminished or lost over the toes. After a period of hyper-reflexia, the Achilles and subsequently the patellar reflexes disappear. Acute glossitis and the symmetrically disposed dermatitis of pellagra are well-proved effects of deprivation of nicotinic acid and possibly other substances contained in crude liver extract. Maceration and cracking of the skin at the corners of the mouth have been ascribed to riboflavin deficiency, and likewise to lack of B<sub>6</sub>.<sup>17</sup> The signs of vitamin D deficiency in the growing child are well known in the form of rickets. The effects of prolonged lack of this substance in the adult are less well defined. It is probable, however, that certain types of osteoporosis result, at least in part, from insufficient vitamin D. Lack of the recently described antihemorrhagic substance, vitamin K, may produce a clinical picture indistinguishable from scurvy in the jaundiced and occasionally in the nonjaundiced patient.

However, neither dietary analyses nor the details of the individual clinical pictures can supply more than suspicion of the possibility of deficiency disease except when the latter is far advanced. Research in the field of vitamin chemistry

is yielding analytical methods suitable for clinical purposes. Technics for quantitative vitamin determinations on blood and urine are being developed. Certain of these are now at least relatively satisfactory, notably those for ascorbic acid,<sup>18</sup> carotene, the provitamin A and vitamin A,<sup>19</sup> and vitamin K.<sup>20</sup>

Application of these methods to clinical medicine is yielding information which indicates a far higher incidence of states of vitamin deficiency than has hitherto been suspected. Marked deficits of vitamin C occur in a variety of conditions including pneumonia,<sup>21,22</sup> tuberculosis,<sup>23</sup> rheumatic fever,<sup>24</sup> rheumatoid arthritis,<sup>25</sup> whooping cough,<sup>26</sup> diphtheria,<sup>27</sup> and gastric and duodenal ulcer.<sup>28,29</sup> Our own studies<sup>30</sup> of gastric and duodenal ulcer have revealed consistently low levels of plasma vitamin C and values for vitamin A below those observed in normal controls. Surgical cases during the postoperative period commonly show a significant fall of plasma vitamin C not infrequently into the scorbutic zone.<sup>31</sup> Many cases of chronic ulcerative colitis that we have studied likewise have had low vitamin A and C values, and we have encountered significant vitamin K deficiency unaccompanied by jaundice.<sup>32</sup>

How do these deficiencies arise? In certain instances they are undoubtedly secondary depending upon defective absorption and utilization or excessive loss. More commonly they are primary, resulting from improper dietary. As previously stated, the diet of the average individual is at least suboptimal in its content of vitamin A, B (thiamin), C,

TABLE 2—EFFECTS OF VITAMIN DEPRIVATION

Vitamin A	Essential Pathology Epithelial metaplasia, cessation of bone growth	Disturbed Physiology Night blindness, mucosal and skin dysfunction	Signs and Symptoms Nyctalopia, dry scaly skin, follicular hyperkeratosis, Bitot's spots, melanotic corneal pigmentation
Thiamin B <sub>1</sub>	Myelin degeneration, degeneration, Auerbach's plexuses	Peripheral neuritis, achlorhydria, gastrointestinal atony, circulatory disturbance	Anorexia, fatigue, paresthesia—pain, hyperreflexia, muscle tenderness
Riboflavin	?	Disturbed cellular oxidation	Cheilosis
Nicotinic acid	Dermatitis, enteritis	Diarrhea, dermatitis, mental changes	Inflamed tongue, symmetric dermatitis, psychosis
B <sub>6</sub>	?	Utilization of unsaturated fatty acids?	Nervousness, insomnia, instability, abdominal pain, weakness
C (ascorbic acid)	Alteration of intercellular substances, dental defects	Increased capillary fragility	Hemorrhage
D	Cessation of bone growth, defective tooth formation	Disturbed Ca & P metabolism	Rickets, dental defects
K		Reduction of plasma prothrombin, prolonged clotting time	Hemorrhage

and probably D. Furthermore, diseases characterized by infection, fever, and elevation of metabolism, increased excretion, defective absorption, and the possibility of incomplete utilization inevitably raise the requirements above those of the normal healthy individual.

It is questionable whether or not even the average general hospital diet is satisfactory from the standpoint of this aspect of nutrition. It is important to remember that a diet defective in one respect is almost certainly defective in others. In support of this we have found that the plasma vitamin A and C levels of miscellaneous medical ward patients range at lower levels than in healthy controls.<sup>23</sup> Certain of the commonly used special diets are obviously open to suspicion and criticism. Peptic ulcer and ulcerative colitis, conditions frequently complicated by hemorrhage, are commonly treated by diets demonstrably deficient in their vitamin C content. Postoperative diets are subject to the same criticism. Many cases of cardiac disease are restricted to most inadequate regimens, notably the Karel diet. Similarly, patients with fever and toxemia are limited to dietaries that are incomplete with regard to their vitamin content and do not compensate for the increased physiologic demands.

What is the clinical significance of these deficiencies? Present knowledge does not permit a complete answer.

Distinction must be made between deficiency states obviously not uncommon and frank deficiency disease, in the form of well-established clinical entities, which is uncommon. It is axiomatic that deficiency states rarely, if ever, occur singly in man. And there is a valid corollary. Absence of the specific clinical syndromes characteristic of advanced deficiency disease does not warrant the assumption that significant deficiencies are absent. It is not permissible to conclude that insufficient vitamin intake of itself is a primary etiologic factor in the many conditions in which these deficiencies have been observed. However, the known physiologic function of the vitamins and the structural changes produced by deprivation warrant the conclusion that these deficits may contribute directly to the disease process and to certain of its phenomena. Furthermore, it is not unreasonable to assume that an ideal nutritional regimen enables a patient more effectively to combat disease than one which is deficient. In certain instances recognition and appropriate treatment of vitamin deficiencies constitute a vitally important part of successful management. This is illustrated by the following cases.

### Case Reports

*Case 1* Ulcerative colitis, defective therapeutic diet, vitamin A, C, and K deficiency—A thirty-year-old Italian-American housewife

was admitted to the outpatient department on December 2, 1938. She gave a four-year history of chronic ulcerative colitis. An acute recurrence began five weeks prior to admission. At this time she had been instructed to limit her diet to farinaceous foods and boiled meats, without fruits, fruit juices, or vegetables. The diarrhea increased and was accompanied by profuse rectal bleeding.

The past history was unimportant apart from occasional bleeding from the gums and cutaneous ecchymoses following slight trauma.

Physical examination showed a poorly nourished, pale, nonjaundiced, chronically sick woman. The tongue was normal and the teeth and gums in good condition. No abnormalities of the skin were noted and the heart, lungs and abdomen were negative. Proctoscopic examination revealed a characteristic picture. The mucosa was swollen, acutely inflamed, granular in appearance, and oozed blood freely.

At the initial determination the fasting plasma vitamin C was 0.2 mg per 100 cc well within the zone of scurvy, and the vitamin A was likewise very low, 1.1 Lovibond blue unit equivalents. She was referred to the dietitian who instructed her concerning an adequate diet containing ample sources of vitamin C. Two weeks later she was admitted to the hospital because of increasing weakness, continued blood loss, and two small hematemeses. The blood vitamin C at this time was within the normal range, 1.1 mg per 100 cc but the prothrombin time was forty-seven seconds, indicating a vitamin K deficiency. Treatment limited to diet alone was effective. Rise of the blood cevitic acid and fall of prothrombin time to normal closely coincided with cessation of bleeding. Subsequently, addition of vitamin A in the form of oleum percomorphum was followed by progressive rise of the blood A values.

**Comment.** This patient had been unwisely instructed to follow a diet grossly deficient in vitamins C and K, and probably lacking as well in thiamin, A, and D. Although the classical clinical picture of scurvy was absent and she did not present the physical signs of vitamin A deficiency, she was markedly deficient in both. Lack of vitamin K also probably contributed to the bleeding. Response to dietary management alone and the sustained rise of the vitamin A values after the addition of oleum percomorphum indicate that this mixed deficiency state was primary in character resulting from adherence to a grossly deficient diet.

**Case 2.** Idiopathic steatorrhea, chronic pellagra, psychosis, defective diet, nicotinic acid, vitamin A, and thiamin deficiency.—An eighteen-

year-old Jewish school boy was first seen in May, 1939. The patient was completely uncooperative though docile, in a markedly negative state, and disoriented in time and place. The history, obtained from his mother, was one of long standing diarrhea considered and treated as "colitis" by a variety of medications, by diets, and by psychiatric measures. There had been arrest of growth and progressive mental deterioration. He had recently been in an institution for mental cases.

Physical examination revealed an underdeveloped adolescent male. The skin over the distal portion and alae of the nose presented an extreme hyperkeratosis giving it the appearance and texture of rough sandpaper. There was a suspicion of a butterfly dermatitis over both malar regions and a suggestion of a Casal's necklace. The skin over the dorsum of the hands presented the characteristic lesions of low-grade chronic pellagra. The pupils were equal and active. Teeth and gums were excellent. The tongue showed slight smooth atrophy and some enlargement of the fungiform papillae. There was no inflammation. The heart, lungs, and abdomen were negative. Repeated proctoscopic examination revealed no evidence of organic disease. The deep reflexes were reduced over the lower extremities.

Urinalysis and blood count showed nothing of note. Fractional gastric analysis gave a normal acid curve. The blood calcium was 9.5 mg per 100 cc and the phosphorus 4.4. Stool examination demonstrated a large excess of fats and fatty acids. There was no gross or occult blood. Barium enema showed marked redundancy and atonicity of the colon without evidence of organic abnormality. Vitamin assay showed the blood A to be 1.8 Lovibond blue unit equivalents, a slightly low value, and the blood C 1.0 mg per 100 cc, in the normal zone.

On admission to the hospital a psychiatric consultant reported as follows: "This patient presents a picture of marked mental confusion. There is no spontaneous speech. He answers questions briefly when spoken to, but often hesitates as if searching for the right word. He will frequently correct himself—'I'm seventeen now I'll be twenty-one my next birthday. No, that can't be right. Yes, I guess it is—I'll be twenty-one'—'I'm in the — hospital, no I guess I mean the — hospital.' There are no indications of hallucinations or delusional trends."

He was placed on a high protein, high vitamin diet with daily intramuscular liver extract, nicotinic acid 250 and later 500 mg each day, 12 grams of brewer's yeast powder in tomato juice, thiamin chloride 20 mg parenterally each

day, and a daily dosage of 39,000 units of vitamin A in the form of oleum percomorphum

Marked improvement occurred almost immediately. At the end of two weeks this was striking. The negativism was almost gone. He was much more oriented and was taking an interest in his environment. The lesions of the face and nose had cleared entirely, the neck almost entirely, and the hands much improved. Satisfactory progress has continued although there is a residual and probably a permanent mental defect.

Comment. This case therefore presents the picture of chronic pellagra with mental changes, vitamin A and thiamin deficiency. The idiopathic steatorrhea undoubtedly contributed to the deficiency as did unwise dietary management. Failure to recognize the phenomena of subacute pellagra is undoubtedly responsible for the marked mental changes and for the residuum which are probably permanent. The immediate improvement of the skin lesions and psychotic phenomena to intensive nicotinic acid therapy is characteristic. The sluggish deep reflexes, anorexia which was an early problem, and the dilated atonic colon, all point to thiamin deficiency. It is of interest that at subsequent x-ray examination both the atonicity and filling capacity of the colon were much diminished.

Case 3. Ulcerative colitis, scurvy, pellagra, macrocytic anemia, hypoproteinemia.—A thirty-six-year-old married Jewish woman was first seen in consultation in January, 1936. Appendectomy and bilateral oophorectomy had been performed in 1929. Shortly thereafter she began to have intermittent attacks of painless watery diarrhea following periods of nervousness or emotional tension. In 1932 the intestinal symptoms became chronic and the stools occasionally contained blood and mucus. Her course thereafter was progressively downhill with increasingly severe attacks.

When first seen she presented the picture of advanced ulcerative colitis, toxemia, inanition, and anemia. There was remittent fever and profuse painful diarrhea, and the stools contained considerable amounts of blood and mucus. X-ray examination revealed a proximal type of ulcerative colitis and the small intestine changes that are associated with deficiency disease.<sup>22</sup>

Throughout the next three weeks her intake of foods containing vitamin C was very low. At the end of this period a series of massive hemorrhages from the colon occurred and she was hospitalized under our observation. On admission she was in serious condition. There were marked emaciation, dehydration, and severe anemia. The skin was harsh and dry and the

tongue beefy red. Petechiae were present in the conjunctivas. The abdomen was distended, tense, and tender to light palpation and percussion. Although impending perforation was feared, a surgical consultant considered her condition too precarious to warrant operation. Immediate treatment consisted of fluids by vein and two transfusions.

The continued rectal bleeding, the conjunctival petechiae, and the certainty of inadequate vitamin C intake during the three weeks previous strongly suggested the possibility of scurvy. Although cevitamic acid determination could not be done, she was given 250 mg. of ascorbic acid intravenously for five days. At the end of this period bleeding ceased critically and recurred only intermittently and in insignificant amounts. Her condition was improved although there was extensive edema of the lower extremities and over the sacrum. The tongue was definitely less inflamed.

On admission she was placed on a high protein diet without milk supplemented by added calcium and rich vitamin sources. A marked anorexia, however, could not be overcome. Apart from 500 cc. of fruit juices, the caloric value and specific food factor content of the diet could not be maintained at proper levels.

At the beginning of the third week the situation was further complicated by the development of persistent and increasing nausea. In the course of the next few days a marked change occurred. The hemoglobin and erythrocytic count had fallen to the admission levels. Edema was increased and there was free fluid in the peritoneal cavity. The anterior third of the tongue was fiery red, painful, and showed swollen papillae. There were serpiginous ulcers over the mid portion with smooth shiny bases where the papillae had sloughed. In other areas there were patches of grayish adherent membrane. A reddish dry eczematoid rash was symmetrically disposed over the lower third of the anterior aspect of the thighs, the anterior surface of the knees and the lower part of legs. The stained blood film revealed definite macrocytosis and the color index was above unity.

Gavage feedings containing 12 grams of vegex per day were started and continued for a week, and 5 cc. of solution of liver extract was given intramuscularly each day. These were quite painful because of the extreme emaciation, and in view of marked and abrupt improvement they were discontinued after three days. At the end of the week of gavage feeding nausea had ceased and appetite improved to such an extent that further forced feeding was unnecessary. Reduced iron 0.18 gram was given daily and continuously.

At the beginning of the fifth week the tongue again became inflamed. The anemia was still macrocytic in type and the stained blood film contained numerous megaloblasts. In other respects there was definite improvement and no change of therapy was made at this time. The anemia remained macrocytic despite progressive rise of the hemoglobin and erythrocytic count. Consequently, beginning in the eighth week 5 cc of liver extract was given intramuscularly every other day for seven doses. The anemia and macrocytosis responded promptly and permanently. Convalescence from this point was uneventful.

**Comment.** This patient therefore presented the clinical phenomena of acute scurvy, acute pellagra, hypoproteinemia, and a severe macrocytic anemia developing as complications of a recurrent attack of ulcerative colitis. The scurvy was undoubtedly conditioned by the period of markedly deficient diet. In the light of the present knowledge, a thiamin deficiency probably contributed to the severe anorexia and this in turn to inadequate food intake and the other deficiency disease phenomena.

**Case 4.** Chronic enteritis, beriberi, vitamin K deficiency, tetany.—A forty-one-year-old white American woman was admitted on April 16, 1939. In 1936 she had developed a remittent watery diarrhea unaccompanied by cramps or tenesmus. The stools did not contain blood or mucus. In 1937 appendectomy and panhysterectomy were performed. Because of an attack of hematuria she was hospitalized in February, 1938. No pathology of the urinary tract was demonstrated. She was told that her blood-clotting mechanism was abnormal and was given three transfusions. Two months later she was again hospitalized because of neuritis of the left leg. During this admission a prolonged epistaxis occurred and later a left femoral phlebitis. Diarrhea recurred and her weight dropped to 78 pounds. Subsequently blood appeared in the stools and she began to bleed from the gums.

In February, 1939 on admission to another hospital a prolonged prothrombin time was found. She was treated by Klotogen and bilron. In the course of this admission an attack of acute tetany occurred, and later severe peripheral neuritis with wrist drop, weakness of the muscles of the neck, and difficulty of deglutition.

She was transferred to the Gray Service of the Roosevelt Hospital on April 16, 1939. She was greatly emaciated weighing only 73½ pounds. The skin was dry, scaly, and presented a diffuse muddy brown pigmentation. A reddish indurated eruption with scattered purulent vesicles

was present over the malar regions and along the edges of the lids of both eyes. The angles of the mouth were fissured. The abdomen was distended and superficial veins somewhat dilated. The liver and spleen could not be felt. The calf muscles of both legs were tender on pressure. The patellar and Achilles reflexes were absent. There was no jaundice. Gastrointestinal x-ray examination revealed an extensive sclerosing type of enteritis of the small intestine and a dilated atonic colon.

On admission the blood vitamin A was low, 1.0 Lovibond blue unit equivalents, the ascorbic acid 0.2 mg per 100 cc, and the prothrombin time fifty-one seconds. The icterus index was 3.5.

She was given a general high caloric diet supplemented by large dosages of vitamins A, C, D, thiamin chloride, and brewer's yeast. Diarrhea was controlled by codeine and paregoric.

Sustained rise of the blood vitamin C occurred immediately, the prothrombin time fell, appetite improved, and weight gain occurred. The prothrombin time, however, did not reach the normal level, but fluctuated, at times being markedly abnormal. Vitamin K concentrate without bile salts was given throughout. No bleeding occurred. She was discharged at her own insistence on June 3.

Two weeks later it seemed advisable to supplement her therapeutic regimen by intramuscular liver extract. This was followed in a few hours by swelling, pain, tenderness, induration, and subsequent appearance of ecchymosis of the right gluteal region where the injection had been given. Shortly thereafter, bleeding from the gums began, and a few days later a large intestinal hemorrhage occurred accompanied by increasing pallor and weakness.

On readmission to the hospital she was pale and anxious. There was continuous oozing of blood from a small lesion on the face. There were scattered cutaneous ecchymoses and a large ecchymosis of the right gluteal region and thigh.

The hemoglobin was 58 per cent (Sahli), the erythrocytes 2,600,000, and the platelets 230,000. The blood vitamin C was 1.1 mg per 100 cc, but the prothrombin was too reduced in amount to be demonstrable.

She was given a transfusion immediately and put on a daily dosage of synthetic vitamin K equivalent to 6,000 units together with 0.7 gram of dehydrocholic acid in divided dosage. The prothrombin time immediately fell to normal levels. No further bleeding has occurred. It has, however, been necessary to continue the daily dosage of vitamin K and bile salts. Im-

provement has been progressive with clearing of the skin, healing of the fissures at the corners of the mouth, gain of thirty-five pounds in weight, cessation of diarrhea, and marked increase of strength

## Discussion

This patient represents a secondary or conditioned mixed deficiency state undoubtedly resulting from defective absorption from the diseased small intestine. This defect appears to be of such magnitude that diet alone is incapable of maintaining a satisfactory nutritional status. She presented definite deficiencies of vitamin A, thiamin, C, and K. The hemorrhagic diathesis was due to vitamin K deficiency occurring without jaundice or evidence of hepatic disease.

The treatment of vitamin deficiency states must be considered from two points of view. It is believed that many individuals obtain suboptimal amounts of certain vitamins. It is recognized that disease in addition to its other effects raises the requirements. These factors together with our own observations lead us to believe that more attention should be paid to diet and that larger amounts of the vitamin-rich foods should be included in the dietary of sick people. Particularly is this true of some of the restricted therapeutic diets.

When, however, deficiencies are clinically recognizable more intensive therapy is imperative. This is especially true since deficiency states are often accompanied by anorexia that may be extreme. Purified preparations or highly potent concentrates of the vitamins known to be important in human nutrition are now available and the therapeutic dosage is sufficiently well established for clinical purposes.

## Summary and Conclusions

Although primary dietary deficiency disease is uncommon, a considerable proportion of the population is probably obtaining suboptimal amounts of certain of the important vitamins. This renders them more susceptible to the development of relative deficiency states in the

TABLE 3—VITAMIN THERAPEUTIC DOSAGE

A	35 000–50 000 units	Per day P O
Thiamin		
chloride	20–30 mg	Per day parenteral
Riboflavin	5 mg	Per day P O
Nicotinic acid	200–300 mg	Per day P O
	15 mg per kilo	Per day parenteral
B <sub>6</sub>	50 mg	Per day P O
C	500–1 000 mg	Per day P O and parenteral
D	1,200–60 000 units	Per day P O
K	2 000 units plus 0.7 dehydrochloric acid	Per day P O

presence of the increased demands associated with disease. Although methods of investigation are insufficient as yet to explore the whole field of possibilities, it is evident that certain vitamin deficiencies occur frequently and in a variety of conditions. These may contribute importantly to the disease process. Data already available demonstrate that subclinical vitamin deficiency states are common in the population of a general hospital and indicate the need for revision of many therapeutic diets and consideration of supplemental vitamin administration.

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## "IT HAS NEVER FAILED THE PEOPLE

"I am proud of medical men who are caring for the great masses of our people. I am proud of the record they have made. I am proud of men who are traveling lonely country roads at night, men who are bringing babies into the world at daybreak, men who are taking the responsibility of human life in the operating room, men who are saving sick children, men who are easing the pain of the aged, men who are friends, counselors, and fathers to their people. These are the men who go to make up the American Medical Association

"Faithfully attended, the meetings of this association are given over to a serious study for improving service to the sick, hours and wages have never been subjects for discussion. Its resources are spent on educational endeavors, in order that its members may better serve. Its publications are devoted to the science of medicine, in order that all that is new may be brought to the bedsides of the sick, even in the most remote districts. I challenge anyone to find in the pages of these publications anything that reflects in any way a selfish interest

"The discoveries of the medical profession are given freely and promptly to humanity without individual profit. Its services are given within the means of the receiver to pay. Its charities are unequaled in the history of the world. Its advancement in self-improvement has never been rivaled. Expectancy of life has been doubled, and the world has been made a better, safer, and happier place in which to live a life lengthened through its efforts. Fraud and quackery have been exposed and legislation protective to the people has been enacted. Education has been advanced and hospital standards elevated. The people have been taught how to

## IT WILL NOT FAIL THEM NOW"

avoid illness, and research has been encouraged and financed. The highest standard of ethics of any profession or trade the world has ever known has been required of the members of the American Medical Association. This is the organization of which I am proud, yet this is the organization which has been accused of being backward, conservative, selfish, and indifferent to human needs

"American medicine has never stood still. We are deeply conscious of improvements to be made in the distribution of medical care. We believe that no plan can be successful without the whole-hearted cooperation of the medical profession, and that the Government, if sincere, will recognize that fact. We have recognized one, and only one, great responsibility—that to the people of our country. We have offered our hearty cooperation in perfecting our services to them. We will, however, not be a party to any plan which lowers the quality of medical service to even the poorest family

"In peace or in war, the medical profession has never failed the people of this country. It will not fail them now. Their needs are our needs, and they will be met as they have always been met by those who through daily contact with the sick know these needs better than any other. Our record is an open book, and we invite full comparison of our unselfish and efficient public service with that of any other agency

"American medicine stands united, proud of its record, loyal to its ideals and dedicated to those policies and principles which are necessary to ensure to the people of this great country the highest standards of medical service"—Rock Sleyster, M.D., President of the A.M.A., addressing the New Hampshire Medical Society

## ACCURACY OF MEDICAL NEWS INCREASING

"Only those closely associated with modern trends in publication are familiar with the vast improvement that has been taking place relative to the publication of news of scientific advances," the *Journal of the American Medical Association* for January 20 declares. "A bulletin recently issued by the United Press to its bureau managers and division managers is worthy of quotation. It reads

"It seems advisable to restate our traditional policy concerning handling stories of 'cures' or other medical developments

"This policy, which dates back more than twenty years, is never to call anything a cure, or in fact give any publicity to any remedy of any description, without a thorough investigation

"This rule is now being strengthened by the following

"Under no circumstances put any story on the leased wire about a remedy. If the bureau manager is convinced that the story has merit, he should overhead it to New York for investigation and consideration there."

# BRONCHIAL ASTHMA

## A New Use for an Old Remedy

GEORGE S KING, M D , Bay Shore, New York

THE etiology and pathology of bronchial asthma are so well known that a discussion of these factors would simply be a repetition of the results of the observations of other and better informed sources

Careful research often reveals the causative factor entering into the individual complaint, and the elimination of the source of irritation prevents recurrence of attacks

The symptoms of asthmatic attacks are too well known to the medical profession to be described in this article There are probably very few diseases in the whole category of medical problems that are at the same time as easy and as hard to diagnose The typical asthmatic attack could be diagnosed by any layman, while some asthmatic cases require infinite study and observation to establish clearly a diagnosis

We are simply presupposing that the doctor is confronted with a well-known and well-diagnosed case of asthma for the relief of which his services are required Up until thirty-five years ago the medical profession depended for the relief of asthma upon several empirical but more or less well-founded remedies, morphine and opium derivatives were the sheet anchors, supplemented mainly by such remedies as iodide of potash, the iodides, derivatives of cannabis indica, lobelia, belladonna, and hyoscyamus These remedies were usually used for, and did accomplish, relief in most cases of asthma. With the advent of the discovery of adrenalin, the asthma picture assumed a much more cheerful outlook The spectacular and almost instantaneous relief obtained by the use of hypodermic injections of adrenalin constituted one of the great milestones in the progress of medicine. Later the physicians' armamentarium was augmented by the addi-

tion of ephedrin, and the combination of ephedrin with barbiturates Ephedrin seemed to offer a particularly promising step forward in that its action was more prolonged than that of adrenalin, while the barbiturates reduced the neurotic element by their sedative action Both adrenalin and ephedrin possess in addition to their ameliorative qualities distinctly limited and dangerous properties, particularly in those cases of asthma associated with severe cardiac involvement or with extremely high blood pressure.

We are all too familiar with the palpitations, tachycardias, and threatened cardiac failure associated occasionally with our well-directed and truly scientific administration of ephedrin and adrenalin Any remedy that can relieve asthmatic attacks without the danger and discomfort that sometimes accompany these remedies should be welcomed not only by the patient but by the medical profession

By a more or less curious coincidence based upon an allergic etiology, eczema and asthma are sometimes very closely allied and sometimes the treatment is so parallel as to assume a direct similarity

Several years ago in treating many severe eczemas, while endeavoring to find out its predisposing cause, I was frequently called upon to relieve the immediate symptoms of severe intense nervous irritability such as intolerable itching and loss of sleep from the pain and burning of this ailment. Frequently I employed intravenous injections of strontium bromide using a solution of 15 gr per ten cubic centimeters

It occurred to me that perhaps the same line of treatment would be of benefit in asthma, which is, as I have stated, sometimes an allied condition I cautiously began the administration of intravenous

solution of strontium bromide to many of my asthmatic patients who had not responded to the classical treatment of adrenalin, ephedrin, barbiturates, and opium derivatives administered for immediate relief. Thus I did while working out their individual allergies and causative factors. The results of these experimentations, if you wish to call them such, were most gratifying and in many instances positively amazing. Patients upon whom adrenalin, ephedrin, and morphine had been used for a long period of time had become so inured and tolerant of these drugs that they failed to obtain relief, but upon receiving an intravenous injection of strontium bromide they would experience immediate relief with no untoward results if the drug was administered very slowly. The administration of strontium bromide by the intravenous route is generally accompanied by more or less systemic reaction in the form of a diffused feeling of warmth or heat, the same as that experienced in the administration of calcium gluconate. This slight discomforting condition, however, is practically nullified if the solution is injected very slowly. It has been my frequent experience that, before the entire 10 cc of the solution was injected, the patient had complete relief of all symptoms. This relief is never accompanied by that feeling of discomfort, palpitation, or tachycardia so frequently experienced by those who do not tolerate adrenalin or ephedrin particularly well. As a matter of fact following the intravenous injection of strontium bromide the patient experiences a marked relief from all asthmatic symptoms. The sedative effects of the bromide so administered is much more prolonged than the relief experienced from the other drugs mentioned. It is not an unusual experience to have the patient, immediately upon being relieved of his asthmatic symptoms, indulge in a quiet and refreshing period of relaxation often accompanied by sleep due to the well-known and specific action of the strontium bromide upon the cerebral and peripheral nervous system.

In cases which do not respond immediately to the first injection, a second or even third injection may be given without reference to time, as the strontium bromide solution is practically nontoxic and, unless administered in large doses and over a prolonged period of time, has no untoward action except in rare instances where the patient has a decided bromide intolerance. I have never seen any anaphylactic reaction due to the administration of this drug intravenously. I have several patients who have a bromide allergy who immediately react to the slightest amount of bromide administered by mouth, but I have never observed any ill effects other than the local or skin manifestations due to bromide intolerance. It has been my observation that many asthmatic patients receiving intravenous injections of strontium bromide experience prompt relief that is much longer in its action than that of adrenalin or ephedrin except when these drugs are administered in combination with morphine. There are certain patients who are extremely intolerant of morphine or any opium derivatives. The same careful observation of the allergic idiosyncrasy of the patient should be observed in the administration of strontium bromide intravenously as would be observed in the intravenous injection of any solution foreign to the metabolism.

In my opinion the intravenous injection of strontium bromide is of particular value in cardiac asthma or in persons suffering with asthma who have a decided neurotic condition or who have a marked arteriosclerosis and hypertension. The bromides in these conditions have always constituted one of our very best remedies and have established themselves, on account of their sedative and relaxing properties, as one of our most reliable remedies for the amelioration of the nervous symptoms and the reduction of blood pressure in hypertensive cases.

I have diligently searched through the literature pertaining to the treatment of acute asthma and have failed to note any reference to this form of treatment. I am, therefore, presenting the results of my in-

dividual experience, both in private and hospital practice, hoping that it may contribute something toward the relief of this perplexing condition

I do not offer this treatment as a cure-all or as a positive relief for every case, but I do think that it should be given a larger clinical application by other men

to determine if they obtain the same results as I do

I am thoroughly convinced that this remedy has a unique value. It is non-toxic, noncumulative, a direct sedative upon the nervous and reflex system, and in my practice has proved to be one of our most valuable antiasthmatic remedies

#### STIMULATING SUGGESTIONS

Dr. William T. Berry, the new president of the Medical Society of the County of Queens, made some interesting suggestions in his inaugural address on January 30. 'Last year,' he said, 'the Medical Staff of the Queens General Hospital presented a wonderful program at one of our meetings, and they are willing to repeat which brings to my mind the idea that there is no reason why all the various hospitals in our County should not each have a special night for presentation of a program.

'In the last few years, as times have become rather lean financially, we have diverted our proclivities to increasing our income by, perhaps if I may say so, offering greater competition to our brother practitioners, and during all this time we have neglected to explore new fields which are full of remunerations. Queens County ranks in the upper ten cities of the United States industrially. There are over 1,800 manufacturers in its confines and for a great number of these industries there are monthly journals in which is stressed an entity called Industrial Medicine.

'The employer is becoming more and more conscious of the need of having healthy employees and of preventing his employees from suffering from occupational diseases, and, in addition, he is becoming social-minded and wants his faithful employees to get a proper break both industrially and privately, thus

bringing up a new subject for our Society to consider

'I advocate the formation of a new section in our Society, to be called the Section of Industrial Medicine. This Section should study industrial diseases and hazards and should work out plans for medical supervision of a factory of from ten to ten thousand employees. The industries of our County should be apprised of the fact that we can take care of their wants scientifically and by so doing create many remunerative positions for our members. All that is needed to form this Section is a petition signed by fifteen members and approval of the *Comitia Minora*.

'The numerous plans for rendering medical care which have been and are being proposed throughout our country should be very carefully studied before being recommended to any Medical Society for adoption. At the present time our Society has under study a type of voluntary insurance for medical care of those who are able to pay but like many similar plans does not have any provision for those who are medically indigent, which has been the chief argument for those agitators who are constantly harping for Socialized Medicine. I would ask that all of us, not only our committee, try to solve that problem. Its answer must be found or we are going to have to accept the solution the aforementioned agitators have for it."

#### THE CENSUS AND THE DOCTOR

The approaching 1940 Decennial Census promises the "most exhaustive assemblage of facts ever compiled on the population, resources, business and occupational activities of the United States."

For the sixteenth time the statistical record of this country is to be brought up to date. In the vast array of figures which will be assembled none are more important than those which relate to health. It is through the census that the actual progress of medical science is measured. The cold facts are to be found in the vital statistics assembled from this source. It is by such means that we know that 704,600 persons will not die this year of tuberculosis, typhoid, small-pox, scarlet fever, diphtheria, pneumonia, influenza, erysipelas, malaria, bronchitis, diarrhea, enteritis, cirrhosis of the liver, childbirth, congenital malformation, childhood diseases or nephritis who would have died from them had not the health conditions of 1900 been improved. By such means we recognize what appears to be the increasing deadliness of cancer, cerebral

hemorrhage, heart disease, diabetes, appendicitis, suicide, homicide, and automobile accidents. The census figures bear not only on matters of life and death. They afford information of great usefulness on the health of the nation, and the economic and social factors which are affecting it. In the census as nowhere else are reflected such great changes as the slowing up of the growth of population, the reduction of the youth to old age rates, the decrease in the city birth rate to the rural birth ratio, the higher death rate of the cities to the death rate of the rural areas, the fluctuation in the urban to rural population ratio which occurs with fluctuation in prosperity, and the spectacular growth of large cities at the expense of the farms, with attendant health problems.

All intelligent and patriotic citizens should exert themselves in the interest of this most important statistical undertaking, the 16th Decennial Census. Physicians especially remark the *Virginia Medical Monthly* should be interested in its success.

# SULFAPYRIDINE IN THE TREATMENT OF PNEUMONIA

RUSSELL L. CECIL, M D, EDGAR A. LAWRENCE, M D, AND EDWARD TOLSTOI, M D,  
New York City

**I**N A recently published study of pneumonia in private practice as observed in New York City, Cecil and Lawrence<sup>1</sup> found the death rate was surprisingly high. In 421 patients with pneumococcal pneumonia who received no serum the death rate was 30.1 per cent, a figure little if any below the standard death rate for pneumonia in large city hospitals. In 107 patients with pneumococcal pneumonia (types I to XIX) who received antipneumococcus serum, the death rate was 20.5 per cent. In a group of consultation patients who received serum the death rate was even higher. A number of factors, such as the severity of the cases selected for serum, delay in administering serum, and inadequate dosage, were stated as probably responsible for the comparatively high fatality rate obtained in the serum-treated cases.

During the winter of 1938-1939 the writers have had an opportunity to treat 106 cases of pneumonia with sulfapyridine. This material, too, has been observed mostly in private practice. It occurred to the writers that it would be interesting to compare the results obtained in the cases treated with sulfapyridine with those obtained in the previous series that had all been treated with serum. Altogether 78 cases were seen by the writers either as private or consultation patients. The remaining 28 patients were studied in the wards of the Beekman Street Hospital.\* Ninety-five cases presented the physical signs of lobar pneumonia. In 11 cases physical examination revealed either small patches of consolidation or perhaps nothing more definite than dullness and rales over the affected lobe. In 38 cases the clinical diagnosis was confirmed by x-ray. In

this study we have included only those cases in which a definite bacteriologic diagnosis was obtained.

Of 106 cases observed 100 were pneumococcal infections and were distributed as in Table 1.

The average age in the 100 pneumococcal infections was 42.9 years. Seven of the patients were under 10 years of age. Twenty-one were over 60. Fifty-six were men or boys, and 44 were women or girls.

The nonpneumococcal cases treated with sulfapyridine are shown in Table 2.

Eight cases out of the 100 pneumococcal infections showed more than one type of pneumococcus in their sputums. However, because of numerical preponderance it was possible in every case to be fairly confident as to which was the actual infectious agent. One case was classified as type XV pneumonia, though the sputum showed, in addition to pneumococci, large numbers of hemolytic streptococci.

One or more blood cultures were made on 90 of the 100 pneumococcal infections. In only 6 patients were positive cultures obtained. 2 type II pneumonia, 3 type III, and 1 type VIII.

## Sulfapyridine Therapy

Sulfapyridine was administered by mouth in tablet form to every patient included in the series. In 4 cases, however, the unpleasant gastrointestinal symptoms excited by the drug were so marked that treatment by mouth was discontinued and the drug was given in concentrated aqueous suspension by rectum.

**Dosage**—In administration of sulfapyridine we have followed closely the original recommendations of Evans and Gaisford.<sup>2</sup> The great majority of patients received an initial dose of 2 grams by mouth. Four hours later they received

\* We wish to thank Dr. D. Senzer of the Beekman Street Hospital who observed the cases from that institution.

TABLE 1—INCIDENCE AND DEATH RATE OF PNEUMOCOCCIC PNEUMONIA TREATED WITH SULFAPYRIDINE

Types	Number of Cases	Number of Deaths
I	10	0
II	6	1
III	37	4
V	7	0
VII	3	0
VIII	8	0
Other types to XXXII	28	1 (type XIX)
Above type XXXII	8	0
Total	100	6

NOTE.—Sixteen of these cases received type specific antipneumococcus serum in addition to sulfapyridine type I 3 cases type III 7 cases type V 2 cases type VII 1 case type VIII 2 cases type XIX, 1 case.

1 gram and thereafter 1 gram every four hours until the temperature returned to normal. If the patient showed no toxic symptoms this dosage was continued for twenty-four to forty-eight hours after the temperature reached normal. When toxic symptoms developed, the dosage was often reduced to 0.5 gram every four hours. In some cases the dose was split and instead of 1 gram every four hours, 0.5 gram was given every two hours. In most instances the tablets were first mashed in a mortar and then suspended in some fluid medium such as water, milk, tea, coffee, or cocoa.

We wish to lay special emphasis upon the total dosage of sulfapyridine employed in this group of cases. In the series of 78 private patients the average dose of sulfapyridine was only 16.4 grams. In the Beekman Street Hospital series the average dose was 30.9 grams, almost twice that for the private series. For the whole series of 100 cases of pneumococcal pneumonia, the average dose was 20.5 grams for each patient. This dosage is less than that employed by Evans and Gaisford<sup>2</sup> and considerably smaller than that now being used in many hospitals.

**Blood Level of Sulfapyridine**—The determinations of free sulfapyridine in the blood were made by the modified Marshall<sup>3</sup> method. In 18 cases, in each of which one to four blood determinations were made, the average sulfapyridine level was 4.6 mg per hundred cubic centimeters of blood. The maximum reading was 10.4 mg and the minimum reading 2.5 mg. In this rather limited

TABLE 2—PNEUMONIA CAUSED BY ORGANISMS OTHER THAN PNEUMOCOCCUS TREATED WITH SULFAPYRIDINE

Organism	Number of Cases	Number of Deaths
Staph. aureus	2	2
H. influenzae	1	1
Str. hemolyticus	2	0
B. Friedländer	1	1
Total	6	4

series of determinations the highest blood levels were noted in elderly patients. For example, the highest level was observed in a patient of 71, and the next two highest levels in patients past 70.

The dosage of sulfapyridine administered appeared to have no very close relationship to the amount of free sulfapyridine in the blood. For example, a patient with type III pneumonia received a total dosage of only 10.5 grams over a period of three days. The sulfapyridine levels were first day, 9 mg per hundred cubic centimeters, second day, 10.4 mg, third day, 8 mg.

**The Clinical Effect of Sulfapyridine**—This effect in pneumococcal pneumonia has, in our experience, been very striking. The regularity with which the temperature, pulse, and respiration drop to normal within a comparatively short time after the administration of the drug is truly amazing. In 80 cases that terminated by crisis after sulfapyridine was started, the average time that elapsed from the initiation of chemotherapy to the completion of crisis was twenty-four hours and six minutes. In the same group of 80 cases of pneumococcal pneumonia it required an average of only 6.3 grams of sulfapyridine to induce normal temperature. Though the Beekman Street Hospital patients received an average total dosage almost double that of the private case, the average amount of the drug necessary to induce crisis was almost the same for both series. 7.9 grams for the Beekman Street series and 6.3 grams for the private case series.

**Toxic Effects**—No serious toxic effects were observed in any of the cases treated in this series. As noted by previous writers, nausea is the commonest untoward effect and may be quite

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claimed that the drug was not started sufficiently early in the disease, except in Case 3 and possibly in Case 6. A satisfactory explanation of why the drug failed is perhaps to be found in the peculiar resistance which some strains of pneumococci show to the action of the drug. That this can sometimes happen has recently been shown by Maclean, Rogers, and Fleming.<sup>5</sup>

### Serum Therapy

Sixteen of the 100 pneumococcic cases received antipneumococcus serum, in addition to sulfapyridine. With one exception, the dosage varied from 100,000 to 200,000 units. All 16 of these cases were severe infections, and 3 of the 16 died.

TABLE 3—FATALITY RATES FOR PATIENTS WHO RECEIVED BOTH SERUM AND SULFAPYRIDINE

Type	Number of Cases	Number of Deaths
I	3	0
III	7	2
V	2	0
VII	1	0
VIII	2	0
	1	1
Total	16	3

### Other Forms of Pneumonia Treated with Sulfapyridine

In addition to 100 cases of pneumococcic pneumonia that were treated with sulfapyridine, brief mention should be made of 6 cases due to other types of microorganisms. Four of the 6 patients died (see Table 2). There was no evidence that sulfapyridine was of any benefit in the *Staphylococcus aureus* or *Hemophilus influenzae* pneumonia. The 1 case in our series caused by the B. Friedländer also died in spite of sulfapyridine. The 2 cases of streptococcus hemolyticus pneumonia both recovered, thus supporting the opinion already expressed by others that sulfapyridine is just as effective as sulfanilamide in the treatment of streptococcus hemolyticus infections.

### Discussion

The most interesting fact brought out by this study has been the striking reduction in fatality rate obtained with sulfa-

pyridine in 72 cases of pneumococcic pneumonia from private practice. Whereas in our previous study 107 cases of pneumococcic pneumonia that received type-specific serum had a fatality rate of 20.5 per cent, the present series of 72 private cases that received sulfapyridine had a fatality rate of only 6 per cent. It has been argued that the winter of 1938-1939 has been characterized by mild pneumonia. It is true that the incidence of type I and type II pneumonia was low during that time and that there was a corresponding increase in the higher types of pneumonia that usually run a mild course. It is also true that only 6 of our 100 cases of pneumococcic pneumonia developed bacteremia. However, any decrease in the incidence of type I and type II pneumonia in the present series was compensated for by the high incidence of the severe type III infections. The low incidence of bacteremia can probably be explained by the prompt administration of sulfapyridine which induced crisis before there was time for bacteremia to develop.

The results obtained in the total 100 cases of pneumococcic pneumonia treated with sulfapyridine agree closely with figures from other clinics. As a matter of interest and in order to check our figures with those reported by others, we have compiled from various American authors 956 cases of pneumococcic pneumonia of various types all of which have been treated with sulfapyridine (without serum). These figures are shown in Table 4. The fatality rate for the entire group of 956 cases treated with sulfapyridine is 7.1 per cent, just slightly higher than the figure obtained in our own series. Attention is called particularly to the type III group consisting of 182 cases treated with sulfapyridine alone with a fatality rate of only 12 per cent.<sup>1</sup> The results in the type I and type II series are equally startling.

In Table 5, 96 bacteremic cases of pneumococcic pneumonia have been collected from the American literature. In these 96 cases treated with sulfapyri-



distressing In the present series nausea was observed in 51 per cent of the cases and was accompanied by vomiting in 31 per cent In many cases, however, the vomiting became less as the patient developed a tolerance for the drug There has been considerable debate as to whether the nausea induced by sulfapyridine is of local or central origin The present trend, however, is strongly toward the view that the drug induces these symptoms by reason of its effect on the central nervous system Certainly in our experience the nausea has not been relieved by the administration of sodium bicarbonate or other gastric sedatives Phenobarbital, however, in half-grain doses administered every four hours with the sulfapyridine, seems to be helpful in some cases

Two patients developed a rather rapidly progressive anemia but not severe enough to necessitate transfusions A mild erythematous rash was observed in 3 cases

We were particularly interested in the toxic effects of sulfapyridine on the kidneys Three patients developed hematuria, and in 1 of these cases sulfapyridine therapy appeared to have been responsible for the development of a renal calculus (reported by Lawrence<sup>4</sup>)

### Complications

The incidence of complications in this series of cases was remarkably low They may be summarized as follows empyema, 2 cases, types I and II, 1 each, otitis media, 3 cases, types V, VIII, and XXII, 1 each, pleural effusion, 1 case, type V, abscess of lung, 1 case, type III

Relapses were noted in 10 cases, 7 of these being type III pneumonia In nearly every case the relapse appeared to be definitely related to premature cessation of sulfapyridine therapy, and usually the recrudescence was quickly controlled by resuming sulfapyridine treatment

### Deaths

In the pneumococcic series of 100 cases there were 6 deaths (Table 1) Four of these were in the type III group One

type II died, and the sixth death was in a case of type XIX pneumonia Protocols of the fatal cases follow

### Case Reports

*Case 1*—Woman, aged 25, had type II pneumonia of the right and left lower lobes. Sulfapyridine was started on the second day of disease with the total dosage 24 grams Crisis occurred in twenty-four hours Then the temperature gradually rose again with development of a terminal empyema Aspiration revealed type II empyema Death occurred on the eleventh day

*Case 2*—Man, aged 54, had type III pneumonia Sulfapyridine was started on the third day of disease There were frank signs, left lower lobe. He responded temporarily to sulfapyridine, but his temperature began to spike and sputum became purulent and foul smelling An operation for lung abscess was performed on the twentieth day of the disease He died several days later

*Case 3*—Woman, aged 40, had type III pneumonia A blood culture on the third day showed innumerable colonies of *Pneumococcus* type III, 100,000 units of type III rabbit serum were administered on the third day, with no effect Sulfapyridine was started on the sixth day, with no effect, and she died on the ninth day

*Case 4*—Man, aged 54, had *Pneumococcus* type III Sulfapyridine was started on the second day of the disease Blood level of sulfapyridine was 7.6 mg on fourth day, total dosage was 20 grams There was no clinical effect

*Case 5*—Woman, aged 68, had type III pneumonia Blood culture was sterile Sulfapyridine was started on the second day and the patient also received 200,000 units of type III rabbit serum The total sulfapyridine dosage was 24 grams On the fourth day the patient developed symptoms of coronary thrombosis Death occurred on the seventh day

*Case 6*—Man, aged 60, had type XIX pneumonia 160,000 units of *Pneumococcus* type XIX rabbit serum were administered on the second day of disease Sulfapyridine was started on the fourth day, total dosage was only 3 grams Death resulted apparently from sudden cardiac failure on fifth day of the disease

### Comment

A review of these fatal cases will show that 4 of the 6 cases were over 50 years of age This is not an adequate explanation of why they died, nor can it be

Perhaps the safest course for the general practitioner to pursue would be as follows

As soon as the clinical diagnosis has been established, a specimen of sputum and a blood culture are sent to the laboratory. The patient is then started on the following regimen: sulfapyridine, 2 grams by mouth, four hours later the 2-gram dose is repeated. In the present study, the second dose consisted usually of only 1 gram, but in order to obtain a high blood concentration at the earliest moment, 2 grams is probably preferable. Four hours later 1 gram of sulfapyridine is administered, and thereafter 1 gram is given every four hours until the temperature reaches normal or until the drug is found to be ineffectual. Evans and Gaisford<sup>2</sup> recommend a limit of 25 grams, but at Bellevue Hospital the rule has been to stop the treatment after a total dosage of 16 grams unless there are orders to the contrary.

As soon as the sputum type is reported, a decision must be reached as to whether or not specific serum should be given in addition to the sulfapyridine. Some prefer to wait until after sulfapyridine has been given an eighteen- to twenty-four-hour trial. Then if the temperature is normal or almost normal, serum is withheld. On the other hand, if the drug appears to be ineffective or patient is showing marked symptoms of intoxication from the drug, serum should be administered. It is generally felt that serum is more effective when given early in the disease and that it has very little effect if given after the fourth or fifth day. Sulfapyridine, on the other hand, appears to affect the pneumococcus at any time in the course of the disease.

The contraindications for continued sulfapyridine therapy are (1) marked nausea and vomiting, (2) erythematous drug rash, (3) hematuria and abdominal pain, (4) leukopenia, (5) rapidly progressive anemia, (6) jaundice, (7) pneumonia developing after an abdominal operation where vomiting might cause serious trouble.

The contraindications for serum would be (1) cases of pneumococcic pneumonia

where type cannot be determined, (2) history of recent administration of serum, (3) severe asthmatics, (4) strongly positive skin or eye test, (5) severe shock reaction following first injection of serum.

The indications for the administration of both sulfapyridine and serum would be (1) rapidly spreading infection of known type with toxic manifestations, (2) bacteremic cases, (3) pneumonia in pregnant women. Administration of serum in conjunction with sulfapyridine usually means that less of both agents will be required than would be if either were used alone.

The outstanding advantages of sulfapyridine over serum are (1) its cheapness, (2) the simplicity of administration, (3) its value in all types of pneumococcic pneumonia. This is very important when for any reason the type cannot be determined.

There are certain precautions which must be taken in the administration of sulfapyridine: (1) daily examination of urine for blood, (2) daily complete blood counts, (3) careful observation of the patient for jaundice, blood dyscrasias, and drug rashes.

The time is not ripe for final determination of the relative merits of sulfapyridine and serum. Extensive research is under way and eventually a correct answer will be available. In the meanwhile the rules laid down above would seem to be rational and to give the pneumonia patient the benefit of the doubt in those instances where any doubt exists as to the preferable mode of procedure.

### Conclusions

1 One hundred cases of pneumococcic pneumonia treated with sulfapyridine are reported. Sixteen of the cases received specific serum as well.

2 The case fatality rate for the 100 cases was 6 per cent. In the 16 severely ill patients who received both sulfapyridine and serum, the fatality rate was 18.7 per cent. With the exception of nausea and vomiting, no severe reactions were encountered in the series.

3 The relative merits of sulfapyridine

TABLE 4—INCIDENCE AND DEATH RATE OF PNEUMOCOCCIC PNEUMONIA TREATED WITH SULFAPYRIDINE  
956 Cases Collected from North American Literature<sup>4-14</sup>

Type	Number of Cases	Number of Deaths
I	214	11
II	58	4
III	182	22
IV	50	5
V	62	3
VI	21	0
VII	62	2
VIII	66	2
IX	6	0
X	2	0
XI	6	0
XII	14	0
XIII	6	2
XIV	38	1
XV	7	1
XVI	8	1
XVII	6	0
XVIII	16	0
XIX	20	1
XX	12	1
XXI	2	0
XXII	7	1
XXIII	12	2
XXIV	3	0
XXV	5	1
XXVII	4	0
XXVIII	3	1
XXIX	5	0
XXX	1	0
XXXI	1	0
XXXII	4	0
Other types	53	7
Total	956	68 (7.1%)

dine the fatality rate was 25 per cent, about one-third of the rate for the cases that have received no specific therapy.

Sulfapyridine seems to be effective in all types of pneumonia. One is tempted to add that it is particularly effective in pneumococcic type III infections. Certainly for the first time in the history of this very severe form of pneumonia, we have at our command an agent that has a remarkable effect on the clinical course of the disease as well as on the fatality rate.

The incidence of toxic reactions to sulfapyridine therapy appears to be proportional to the total dosage employed. This applies not only to the milder reactions, such as nausea and vomiting, but to the more severe ones as well. Every patient who receives sulfapyridine should have his urine tested daily for blood and other signs of renal irritation. A daily blood count is also advisable to guard against acute hemolytic anemia and agranulocytosis. Some writers are of the opinion that every patient who receives sulfapyridine should be under hospital care.

In patients who do not respond promptly to treatment, the blood should

TABLE 5—INCIDENCE AND DEATH RATE IN BACTEREMIC PNEUMOCOCCIC PNEUMONIA TREATED WITH SULFAPYRIDINE

96 Cases Collected from the North American Literature<sup>4-14</sup>

Type	Number of Cases	Number of Deaths
I	43	6
II	9	1
III	11	3
IV	4	3
V	10	3
VII	1	0
VIII	5	1
Other types to XXXII	13	7
Total	96	24 (25%)

be quantitatively tested for free sulfapyridine preferably by the modified Marshall<sup>15</sup> method. Five to 10 mg per hundred cubic centimeters is considered the optimal concentration. If the blood concentration is low and the patient has not responded to the drug, larger doses should be administered. In some clinics patients who cannot take sulfapyridine by mouth or who cannot absorb enough for adequate blood concentration are being treated intravenously with the soluble sodium sulfapyridine. However, this drug, because of its marked alkalinity, may produce sloughing if any of the solution escapes into the subcutaneous tissue. For this reason it must be administered with great caution.

Physicians are very frequently confronted with the question whether, in a given case of pneumonia, they should give serum or sulfapyridine or both agents. At the present time we have our choice of two specific weapons for the treatment of pneumococcic infections. As reported by most observers, the fatality rates are lower with sulfapyridine than with specific serum. However, the published results with rabbit serum as reported by Horsfall<sup>17</sup> and by Loughlin, Bennett, and Spitz<sup>18</sup> certainly approximate closely the best results obtained with sulfapyridine. More recently Bullowa<sup>19</sup> reported a series of controlled cases in which the lowest mortality rate occurred in cases treated early with sulfapyridine plus serum. The death rate for 64 serum-treated cases was 12.5 per cent, for 69 sulfapyridine-treated cases, 10.2 per cent, and for 50 cases treated with serum plus sulfapyridine, 8.0 per cent.

# UROLOGIC COMPLICATIONS IN GYNECOLOGY

ARTHUR J MURPHY, M D , F A C S , New York City

(From the Clinic of the Woman's Hospital)

SOME of the most troublesome complications that the gynecologist has to treat are those that involve the urinary tract. Their treatment often lies within the province of the urologist, but those complications that arise in the midst of an operation, when the aid of a urologist cannot be obtained, must be treated by the gynecologist. It is to his advantage to be able to treat intelligently these operative complications, also acute post-operative renal infection, the commonest of all urologic complications in gynecology.

## Acute Postoperative Renal Infections

Laws states "More than 30 per cent of patients who come to a gynecologic hospital complain of urinary symptoms." It is not surprising, therefore, that so many of these patients develop postoperative renal infections. Six years ago, because of the frequency of this complication, the writer made a study of acute postoperative renal infections at the Woman's Hospital.

## Etiology

In our series this complication occurred 252 (2.5 per cent) times in 11,160 operations. Why is renal infection so common following gynecologic operations? As stated above, some of these patients have urinary pathology from infections in childhood or during pregnancy and many of the gynecologic lesions for which they are operated predispose to infections of the urinary tract. It was demonstrated by Brettauer and Rubin that prolapse of the uterus causes dilatation and distortion of the ureters and misplacement of the bladder. We have many examples of similar lesions produced by large myomata, ovarian cysts, and pelvic inflamma-

tory masses. Operative trauma is another frequent cause of renal infection. Extensive vaginal plastics and laparotomies for complicated tumors almost always traumatize the bladder or ureters. In some instances this injury may be slight but enough to produce edematous obstruction in the ureters, or it may be more marked but still pass undetected and only be demonstrated when cystoscopy is done to determine the cause of the renal infection that usually follows.

## Results with Former Treatment

Acute renal infection may subside spontaneously or prove rebellious to any type of treatment. In this group of cases the average duration of the infection was fifteen days but 76 cases (30 per cent) persisted more than fifteen days, 15 cases (5.9 per cent) continued more than forty days and in 1 case the infection endured for 170 days. The more severe infections were treated by the urologic staff under the direction of Dr. Henry G. Bugbee. Nevertheless, some of these infections were most difficult to manage and had a grave influence on the physical status of these patients. Some of the patients developed other complications as a result of their urinary infections. Many had infected wounds that healed slowly and 13 per cent of these severe cases required blood transfusions to combat the anemia caused by the urinary infection.

Seventeen patients (6.7 per cent) required ureteral catheter drainage from two to forty days. The average duration of this drainage was thirteen days. The necessity for such drainage attests to the severity of some of these infections.

In the entire group an average of thirty days' hospitalization was required, but

and serum are discussed together with indications and contraindications for these agents

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War Department  
Office of The Surgeon General  
Washington

## To the Editor

There has been an increase in the strength and in the activity of the United States Army with a corresponding increase in the responsibilities of its medical components. To augment the medical services necessitated thereby, officers of the Medical Corps Reserve are being placed throughout the medical organization of the Army.

The number of inquiries reaching this office would seem to indicate that more information on the subject would be appreciated by the medical profession. With a view to disseminating such information, a brief résumé of the situation is enclosed. If you would publish in substance the accompanying item, you would do a favor for this office and any interested physician.

JAMES E BAYLIS, Colonel  
March 6, 1940 Medical Corps, Executive Officer

## Army Experience for Physicians

An interesting medical corollary to the augmentation of the United States Army during 1940 and 1941 and to the planned large scale Army maneuvers during the spring and summer of 1940 is the broad medicomilitary experience that a great number of civilian physicians will receive. Medical reserve officers are being used to augment the entire Army Medical Service, which includes everything from small unit installations to large station hospitals, general hospitals, and hospitals designed primarily for the treatment of specific types of cases.

Physicians under thirty-five years of age who are desirous of obtaining extended active duty with the Army but who do not hold reserve commissions are being offered appointments in the Medical Corps Reserve in the grade of first lieutenant, in order to permit them to be placed on such duty. Captains and lieutenants are at present being offered excellent assignments throughout the continental United States, and it is hoped that authority will be granted to actually permit some officers to go to Hawaii and Panama. In addition to having a new and very busy experience in the practice of medicine, the average officer finds the pay and allowances attractive. The pay and allowances for a married first lieutenant amount to approximately

\$263 a month, for a single first lieutenant to approximately \$225 a month, for a married captain to approximately \$316 a month, and for a single captain to approximately \$278 a month. In most cases the above pay and allowances would apply inasmuch as government quarters are not usually available for officers on extended active duty. In the few instances where government quarters are available, the amounts would be \$40, \$60, \$80, and \$80 less per month, respectively. In addition, the officer is reimbursed for mileage traveled from his home to his station, and upon completion of his tour of duty is reimbursed similarly for the travel to his home.

Application for one year of active duty or for appointment in the Medical Corps Reserve with a view to obtaining one year of active duty with the Army should be requested at once by a letter addressed to the commanding general of the corps area\* wherein the physician permanently resides. In addition, the application should contain concise information regarding permanent address, temporary address, number of dependents, earliest date available for active duty, and that internship has been (or will be) completed, and it should be accompanied by a report of physical examination recorded on the Army Form WD AGO 63, which may be obtained from any Army station. From the group of reserve officers placed on extended active duty since August 1939, over 25 per cent of those within the age requirements of thirty two years of age or less for commission in the Regular Army Medical Corps found military service sufficiently to their liking to cause them to take entrance examinations for the regular Army.

- \* First Corps Area (Me. N H Vt. Mass. R. I Conn.) Army Base Boston 9  
Second Corps Area (N Y N J Del) Governors Island New York  
Third Corps Area (Pa Md Va. D C) Post Office and Court House Baltimore  
Fourth Corps Area (N C S C Ga Fla Ala Tenn Miss La) Post Office Bldg Atlanta Ga  
Fifth Corps Area (Ohio W Va. Ind Ky) Fort Hayes Columbus, O  
Sixth Corps Area (Ill Mich Wis) Post Office Bldg Chicago  
Seventh Corps Area (Mo Kans. Ark. Ia. Neb Minn N D S D) New Federal Bldg Omaha  
Eighth Corps Area (Tex. Okla. Colo N M Ariz.) Fort Sam Houston San Antonio Tex  
Ninth Corps Area (Wash Ore. Ida Mont. Wyo Utah Nev Calif) Presidio of San Francisco San Francisco

## 18 URETERAL INJURIES

Operations	2 Ureteroabdominal Fistulas	Treatment and Results
1 supravaginal hysterectomy	Urinary leakage from abdominal wound in twenty four hours	Healed in seven days following passage of ureteral catheter
1 supravaginal hysterectomy for large intraligamentous myoma	Urinary leakage from abdominal wound fourth day postoperative	Nephrectomy at end of six weeks
	9 Ureterovaginal Fistulas	
	Pathology	
5 complete hysterectomy	3 large myomata	1 healed following passage of ureteral catheter
1 supravaginal hysterectomy	2 cystadenocarcinoma ovary	3 ureter transplanted into bladder—good results
1 vaginal hysterectomy	1 large bilateral ovarian cyst	3 nephrectomy
1 Latzko cesarean	1 second-degree prolapse	1 destruction of kidney by fistula—completed by x-ray therapy
1 low-flap cesarean	2 abnormal pregnancies	1 did not return for further treatment
	7 Cases Ureterorrhaphy	
5 complete hysterectomy	1 myoma and intraligamentous ovarian cyst	End-to-end anastomosis in 2 cases—1 died on fifth postoperative day of peritonitis—the other had a good functional result but ureteral catheter was obstructed at 8 cm.
2 supravaginal hysterectomy	1 large bilateral dermoid cyst	Ureteroureteral anastomosis in 5 cases—all had good results
	1 large intraligamentous cervical myoma	
	1 carcinoma cervix	
	3 myomata uteri	

duration of our urinary infections from fifteen to eight days. There was only 1 case in this series that continued for twenty-six days, whereas in the previous series 59 per cent persisted for more than forty days and the longest case for 170 days.

None of the patients in the recent series required ureteral catheter drainage as compared with 67 per cent in the previous group. None required blood transfusions, whereas it was necessary in 13 per cent of the serious cases in the other group. There were no deaths in this series while 3 died in the previous group.

Such a comparative study demonstrates the effectiveness of mandelic acid and sulfanilamide in the treatment of renal infection. It is true that the latter series is too small to draw any permanent conclusions, but it does serve as an index of what we can expect in the future from the intelligent use of these new drugs. They decrease the incidence and shorten the duration of renal infections, eliminate the necessity for ureteral catheter drainage in most instances, diminish operative interference, and simplify the management of these infections by the gynecologist.

### Ureteral Injury

Ureteral injury is one of the most serious urologic complications in gynecology. During the past ten years we have treated

18 ureteral injuries, 16 of which occurred at the Woman's Hospital. The pathology encountered, the type of operation, and the treatment of these injuries follow.

**Ureteroabdominal Fistulas**—There were 2 ureteroabdominal fistulas. One followed a supravaginal hysterectomy for a large myoma. Twenty-four hours postoperatively there was urinary drainage from the abdominal wound. The next day a ureteral catheter was successfully passed up the ureter and in seven days the fistula had closed spontaneously. The other fistula followed a supravaginal hysterectomy for a large intraligamentous myoma. Urinary drainage from the abdominal wound started on the fourth postoperative day. This fistula failed to close in six weeks and nephrectomy was performed.

**Ureterovaginal Fistulas**—There were 9 such fistulas and they resulted from the following operations: complete hysterectomy, 5; supravaginal hysterectomy, 1; vaginal hysterectomy, 1; Latzko cesarean, 1; low-flap cesarean with supravaginal hysterectomy, 1. In these cases the following pathology was encountered: large myomata in 3 cases, cystadenocarcinoma of the ovary in 2 cases, large bilateral ovarian cyst in 1 case, second-degree prolapse, 1 case, and 2 abnormal pregnancies. These fistulas were treated as follows: 1 healed spontaneously follow-

## ACUTE POSTOPERATIVE PYELONEPHRITIS

	1921-1933	1938
	11,160 Operations Old Method of Treatment	855 Operations New Method of Treatment
Incidence	252 cases—2.5 per cent	19 cases—2.2 per cent
Average duration of infections	15 days—30 per cent over 15 days—5.9 per cent over 40 days (1 case 170 days)	8 days (1 case 26 days)
Ureteral catheter drainage	17 cases—0.7 per cent—average number of days 13	None
Blood transfusions	13 per cent of severe cases	None
Average number of days in hospital	31 days—5.9 per cent over 40 days	18 days
Operative treatment	1 nephrostomy for pyonephrosis 1 nephrectomy for obstructing calculous pyonephrosis	None
Mortality	3 patients died—1.1 per cent. The 2 patients operated upon died and the third died from bilateral renal abscesses	None

some (8.7 per cent) of these patients had to remain in the hospital for several weeks and some for several months.

Three of these patients died. 1 died of embolism following a nephrostomy for pyonephrosis, 1 died of a prolonged infection in whom nephrectomy for obstructing calculous pyonephrosis was necessary, and 1 died of multiple renal abscesses following a protracted urinary infection.

From this study the frequency and seriousness of acute postoperative renal infections are emphasized. These infections may be resistant to treatment and persist for many days, detract from an otherwise successful operation, interfere seriously with the patient's postoperative recovery, require long hospitalization in some cases, and occasionally prove fatal.

### New Method of Treatment

Since the above study was made a complete innovation in the treatment of renal infections has taken place. Brasch, of the Mayo Clinic, states "During the past three years revolutionary changes have taken place in the treatment of infections of the urinary tract." What effect has the development of mandelic acid and sulfanilamide had on renal infection? A comparison of the results of the previous study with our results this past year in the treatment of renal infections should show the progress brought about by the use of these newer chemotherapeutic drugs.

### Results with Newer Treatment

During the past year we had 19 (2.2 per cent) acute postoperative renal infections in 855 operations. All of these cases

were treated with either mandelic acid or sulfanilamide. These drugs have resulted in only a slight diminution in the frequency of renal infection. This can be explained by the fact that we are doing twice as many operations for urinary incontinence, which requires catheter drainage, and complete hysterectomies as we were when the previous study was made. It has been our experience that renal infections are prone to follow both of these operations so that in reality these drugs have decreased the frequency of renal infections even though it is not demonstrated by the statistics. With the hope of reducing still further our renal infections, we have recently used, as suggested by Brasch, small doses of sulfanilamide postoperatively in those patients who have indwelling catheters or require intermittent catheterization. It should also be used in those whose postoperative urinalysis shows pus or organisms and in those patients who might develop renal infection because of the gynecologic pathology found or because of the nature of their operation.

Another very valuable use for these drugs is in the elimination of pus and organisms from the urine of our postoperative patients even though they have no other evidence of renal infection. This might prevent the all too frequent development of an acute renal infection after the patient leaves the hospital and might eliminate the urinary symptoms, complained of by many of our patients when they are seen in the follow-up clinic.

During the past year the use of these new drugs has decreased the average

patients whose original operations were for carcinoma of the ovary and in a third patient who was too hazardous a risk for another laparotomy

Occasionally, end-to-end anastomosis of the ureter over an indwelling ureteral catheter or accompanied by nephrostomy will be the operation of choice in repairing a divided ureter. In our own hands this operation was not satisfactory. One patient died and the other had an obstruction to the passage of a ureteral catheter although the ureter functioned well. In our opinion the danger of leakage and separation of the anastomosis is too great.

The most satisfactory ureterorrhaphy, in our hands, has been ureteroureteral anastomosis with insertion of the upper end of the ureter into the lower end. Technically it is not difficult, because the ureter is frequently dilated or can be easily dilated by bougies. This type of anastomosis is watertight, gives a good functional result, and is safe. An indwelling ureteral catheter should always be inserted into the ureter before the anastomosis is begun so as to provide adequate renal drainage and prevent the formation of a hydroureter that might interfere with the healing of the ureteral ends. This catheter is allowed to remain in the ureter for several days and then is removed through a cystoscope. But often it will be expelled spontaneously from the bladder.

If the divided ends of the ureter are too widely separated to be anastomosed, vesical implantation of the upper end should be done. If this is not possible, it may be necessary to ligate both ends of the ureter with resultant destruction of the kidney on that side.

In operations for large pelvic tumors, especially those that are intrahagamentous, and in complete hysterectomy one must ever keep in mind the possibility of ureteral injury. Following these operations the pelvis should be carefully inspected for signs of such injury. The fact that 3 of the 11 patients who had ureteral fistulas required a second operation for reimplantation of the ureter into

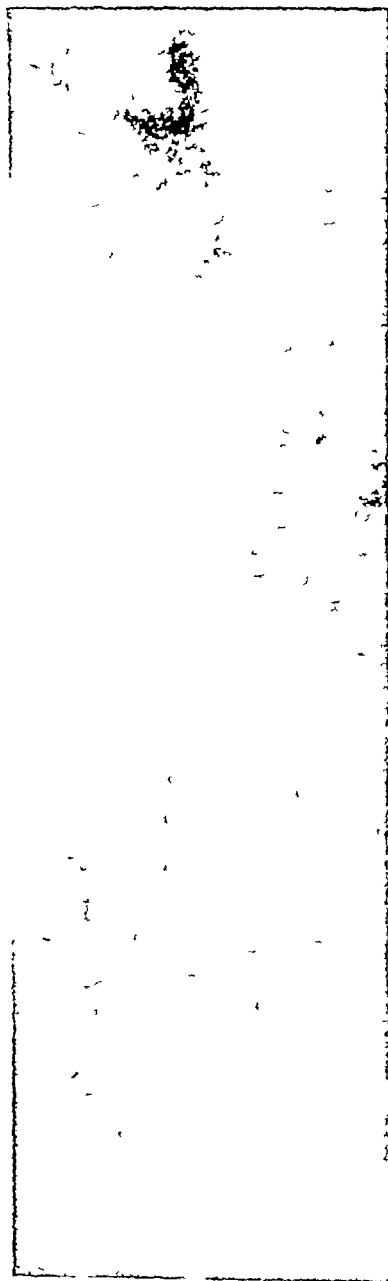
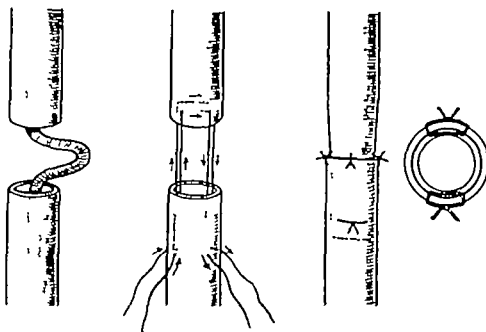


FIG 3 Pyeloureterogram four months postoperative showing normal right ureter and kidney following end-in-end ureteral anastomosis without indwelling ureteral catheter

the bladder and that nephrectomy was necessary in 4 patients is sufficient evidence of the seriousness of this complication





URETERAL ANASTOMOSIS

FIG 1



FIG 2A Right pyeloureterogram taken four months later showing perfectly normal ureter and kidney. Excellent result from end-in-end ureteral anastomosis.

ing the passage of a ureteral catheter, in 3 cases the ureter was transplanted into the bladder with good results, 3 cases required nephrectomy, in 1 case the fistula produced considerable destruction of the kidney and urinary leakage stopped following radiation of the kidney, and 1 case did not return for further treatment.

**Ureterorrhaphy**—In 7 patients the ureter was divided, immediately recognized, and ureterorrhaphy performed. In these cases the following pathology was encountered: myoma and intraligamentous ovarian cyst, 1 case; large bilateral dermoid cysts, 1 case; large intraligamentous cervical myoma, 1 case; carcinoma cervix, 1 case; and myomata uteri, 3 cases. Of the 7 cases, 5 had complete hysterectomy and 2 supravaginal hysterectomy. These injuries were treated in 2 cases by an end-to-end anastomosis of



FIG 2B Cervical myoma size of fetal head which completely filled true pelvis. Right ureter divided during removal of tumor.

the ureter. One patient died of peritonitis on the fifth postoperative day. The other had a satisfactory functional result but there was an obstruction to the passage of a ureteral catheter 8 cm from the bladder. In the remaining 5 patients the upper end of the ureter was inserted into the lower end. All of these patients survived and had an excellent operative and functional result.

### Discussion of Treatment

When the diagnosis of ureteroabdominal fistula is established, an attempt should be made to pass a ureteral catheter by the obstruction in the ureter, because if this maneuver is successful the fistula will probably heal without further treatment. If the passage of the catheter is unsuccessful the fistula should be treated expectantly for at least six weeks during which time it may heal spontaneously. If it does not heal, another laparotomy with reimplantation of the ureter into the bladder is the procedure of choice. If this operation is not possible, then nephrectomy would be necessary.

A similar plan should be followed in the treatment of ureterovaginal fistulas. If the attempt to catheterize the injured ureter is unsuccessful, they should also be treated expectantly for at least six weeks before operative intervention is indicated. In this series ureteral reimplantation into the bladder, which is the ideal treatment, was successful in all 3 cases. Nephrectomy was necessary in 2

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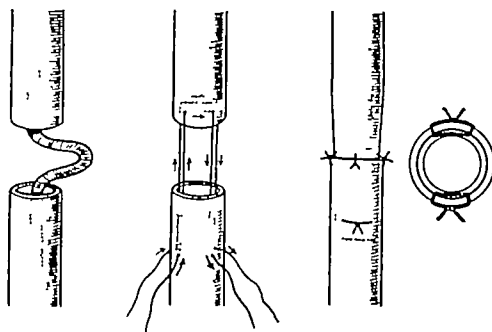
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FIG 3 Pyeloureterogram four months postoperative showing normal right ureter and kidney following end-in-end ureteral anastomosis without indwelling ureteral catheter

the bladder and that nephrectomy was necessary in 4 patients is sufficient evidence of the seriousness of this complication.



FIG 4 One year postoperative showing practically normal renal pelvis and ureter following ureteral anastomosis



FIG 5 Dark area in pelvis from extravasation of pyelographic solution through traumatic opening in ureter

this complication has been limited to 1 case and this patient died on the seventh postoperative day of uremia following a unilateral nephrostomy performed forty-eight hours after operation. When this complication is suspected the diagnosis should be immediately confirmed by cystoscopic study. The question then arises as to the method of treatment. Should the abdomen be reopened or is nephrostomy indicated? Leon Herman reports a mortality of 50 per cent in 10 patients who were treated by bilateral nephrostomy and a mortality of only 25 per cent in 8 patients who were treated by deligation. In his series all of the patients who recovered following deligation were permanently cured, whereas those who were treated by nephrostomy required another laparotomy for ureteral anastomosis or vesical implantation. On the other hand, Feiner reports a mortality of 100 per cent with 2 cases in which he did intra-abdominal deligations. Neither method of treatment is applicable in all cases and each case should be studied in-

### Bilateral Ureteral Occlusion

According to Bland, this is one of the most serious accidents in pelvic surgery, with a mortality of 33 per cent. During the past ten years our experience with

## 18 VESICOVAGINAL FISTULAS

Operations	Results
11 complete hysterectomy	14 fistulas—each one closed by one operation
3 incontinence of urine	2 fistulas—each required two operations
1 cesarean with complete hysterectomy	1 required three operations—patient died of coronary embolism following third operation
1 high frequency amputation of cervix	1 patient did not return for further treatment
1 vaginal hysterectomy	
1 extensive plastic for prolapse	

dividually If the patient's condition is satisfactory, abdominal deligation should be elected, whereas nephrostomy, preferably bilateral, would be indicated if it were too hazardous to reopen the abdomen

### Vesicovaginal Fistula

Another very important and unfortunate complication in gynecology is bladder injury with the formation of vesicovaginal fistula During the past nine years we have treated 18 vesicovaginal fistulas Eleven followed complete hysterectomy, 6 at the Woman's Hospital and 5 in other institutions The writer previously pointed out the danger of ureteral injury in complete hysterectomy, but the danger of bladder injury in this operation is equally as great if not more so There is also considerable chance of vesicovaginal fistula in extensive operations for urinary incontinence, for of the remaining 7 fistulas in this series, 3 followed operations for incontinence of urine The other 4 fistulas resulted from cesarean with complete hysterectomy, high frequency amputation of the cervix, vaginal hysterectomy, and an extensive plastic operation for prolapse

Fourteen of these fistulas were each successfully closed by one operation Two operations were necessary in 2 cases and 1 patient died of coronary embolism following the third operation for the cure of her fistula

### Discussion

For many years there has been little change in our operative technic for vesicovaginal fistulas We do believe, however, that all of these patients should have an intravenous urographic study to eliminate pathology in the upper urinary tract. Cystoscopic observation of the bladder to locate the fistulous opening in relation to

the ureteral orifices is also helpful in planning the operation On several occasions it has been advantageous to have ureteral catheters inserted preoperatively to prevent occlusion or obstruction of the ureter by sutures When the fistula is small the passage of a ureteral catheter through the fistula into the vagina may aid in locating it. Those small fistulous tracts near the vesical neck can often be easily located after methylene blue is injected into the bladder

In this series most of the fistulas that followed complete hysterectomy were the result of bladder necrosis Some of these fistulous openings are small with scant urinary leakage which appears late after operation and for that reason they may be overlooked They are usually located in the vaginal vault and can be easily demonstrated with the patient in the knee-chest position Because the cervix has been removed and because of their inaccessibility they are often difficult to close On the contrary, those fistulas that follow operations for incontinence are very accessible, but because of loss of tissue from the previous operation and often destruction of part of the vesical sphincter they may be difficult to close and still give good bladder control Sometimes it is wise to operate on such cases in two stages, one to close the fistula and later an operation to give bladder control

There is always danger of bladder injury in any pelvic operation, especially in operations for incontinence of urine and complete hysterectomy In treating this complication one should always take advantage of the knowledge gained by a thorough urologic study Every precaution should be taken to avoid bladder injury because a vesicovaginal fistula is a distressing complication to both the patient and surgeon



FIG 6 Plate reversed Flat plate of abdomen twenty-four hours postoperative. Removal of intraligamentous tumor with division of right ureter. Ureteral catheter placed in ureter for drainage during end-in-end ureteral anastomosis.

### Summary

A comparative study of acute postoperative pyelonephritis at the Woman's Hospital from 1921 to 1933 with the older methods of treatment and this past year with the use of mandelic acid and sulfanilamide is presented.



FIG 7 Intravenous urogram one week postoperative showing excellent function of both kidneys and no dilatation of right ureter following end-in-end anastomosis with indwelling ureteral catheter.

Using this study as an index it is hoped that the proper use of these two compounds will decrease the incidence, shorten the duration, and diminish the seriousness of this important complication.

Also submitted is a study of 18 ureteral injuries in which is pointed out the types of operations from which they resulted,

the pathology encountered at operation, and our ideas as to the treatment of this complication

A study of the cause and results of 18 vesicovaginal fistulas is presented with suggestions as to treatment.

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## Discussion

Dr William A Milner, Albany, New York— I wish to congratulate Dr Murphy on his most excellent paper and his fine statistical study which should be very valuable to everyone concerned with this problem

My experience with urologic complications in gynecology following surgery in the City of Albany has been somewhat limited for the reason that urologic complications of any major consequence in that department are very unusual I believe this is due to the fact that Dr Sampson has been responsible for placing more well-trained gynecologists in the field than any city of its size or perhaps many a great deal larger

Hydronephrosis associated with injury to the lower ureter at surgery is not uncommon In these cases it is well not to ligate the ureter

before cutting it as is the usual custom in nephrectomy

We have had 1 case in which this was done resulting in a pocket in the ureteral stump that gave rise to chills, fever and signs of an accumulation of pus

In cases in which the obstruction is in the ureters, we would expect much more pathology in the upper urinary tract because we do not have the urinary bladder to take up the back pressure such as it does so admirably in vesical neck obstruction

Cases of fibroid tumor may simulate prostatic hypertrophy in their signs and symptoms Careful study of the vesical neck in these cases will reveal a ball valve action assumed by these tumors

Prolapse of the uterus gives an almost identical picture of long-standing vesical neck obstruction with its attendant hydronephrosis and hydro-ureter

Lastly, I would like to mention just a word about one of the newer medications we have used in urinary tract infections Disulfanilamide has been the most effective drug we have ever used in combating these infections It has been used in B coli, B proteus, Staphylococcus albus and aureus, Streptococcus hemolyticus

Over 90 per cent of the colon group were cured usually within a period of one week Many of the staphylococcal infections clear up as easily as the colon group but the percentage of cures is not quite so high, and some cases are not affected at all We have used the drug in doses of 30 gr daily as a maximum

Toxic symptoms are not as pronounced as with sulfanilamide. Multiple neuritis has occurred in 5 of about 300 cases but I believe can be avoided by proper dosage and controlling the patient more closely

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## A DISTINGUISHED SERVICE AWARD

Dr James Gray Carr M D, F.A.C.P., of Chicago Secretary and Professor of Medicine, Northwestern University School of Medicine was awarded the Mississippi Valley Medical Society's Distinguished Service Award for 1939 at the recent annual meeting of the Society held at Burlington, Iowa Dr Carr was presented with the gold medal award and a cer-

tificate by the president of the Society, Dr M Pinson Neal, Professor of Pathology, University of Missouri School of Medicine, at the annual banquet on September 23

The award is given annually to an active member of the Society for unusual and distinguished service to the medical profession."

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Patient "Don't you think, doctor, it would be a good idea if I were to go to some place where the climate is warmer?"

Doctor "Good heavens, no That is just what I am trying to prevent."—*Medical Record*

"Did the patent medicine you purchased cure your aunt?"

"Mercy, no On reading the circular wrapped around the bottle she got two more diseases"—*Medical Record*



# SPONTANEOUS PNEUMOTHORAX

## Industrial Experience with 25 Cases

JOHN L. NORRIS, M D, Rochester, New York

(From the Medical Department of the Eastman Kodak Company)

**I**N SPITE of several conclusive articles during recent years indicating that spontaneous pneumothorax occurring in active, symptom-free people is benign and rarely associated with tuberculosis, it is our impression from recent literature that there still exists considerable confusion about this not uncommon condition. For this reason it seems fitting to add our experience at Kodak Park during the last six years to the already impressive body of published data on this subject and to add our support to the idea that the condition be called "benign spontaneous pneumothorax" to distinguish it from the spontaneous pneumothorax occurring as a complication in other serious pulmonary diseases.

The following case reports will illustrate the various modes of onset, the course in all is striking in its uniformity.

### Case Reports

*Case 1*—K. R., aged 32, while resting at home in the evening following an average day of light work, was taken with a sudden, excruciating pain across the upper abdomen, dyspnea, nausea. The pain gradually shifted to the right upper abdomen so that by the time his physician arrived, the clinical appearance was that of an acute cholelithiasis. The patient was hospitalized and because the pain persisted, surgical intervention was seriously considered. A chest radiograph, fortunately, was taken. A large right pneumothorax was demonstrated. The patient returned home after a few days and to work after a completely uneventful six-week convalescence. There have been three recurrences all less severe than the first, the x-rays demonstrating a large bulla in these recurrences.

*Case 2*—J. J., aged 35, while bending over to pick up a piece of paper from the floor, was seized with a sudden, very severe pain in the lumbar region of the back, so severe that he

"couldn't get his breath." He was brought to the medical department by car, and in the few minutes that elapsed between the onset and our examination, the pain had shifted to the right side, just at the costal margin. Physical examination, aside from his dyspnea and acute discomfort, was of little help. Fluoroscopy of the chest showed the mediastinum to be in normal position, the heart was rapid and normal in size and shape, and there was a suggestion of decreased lung density at the right apex, but no definite lung border could be made out. Radiographs taken an hour or so later revealed a massive right pneumothorax. Clinical course was afebrile and completely uneventful. The time lost was three weeks.

*Case 3*—D. F., aged 25 years, while sitting at his desk, was seized with sudden severe pain through his right chest and with dyspnea. He walked with assistance to the medical department where fluoroscopic examination showed the right lung to be almost completely collapsed, but without displacement of the mediastinum. After a two-week rest in bed he returned to work.

Our experience during the last six years is summarized on the basis of age, sex, frequency of recurrence, weight, lost time, other pulmonary pathology, character of onset, and length of follow-up period.

We have found no pneumothorax in applicants for employment, indicating that in our experience at least it is not symptom-free. Other observers have discovered it without symptoms in routine chest radiographs, hence the name it bears in France, "pneumothorax des conscrits." We shall not discuss here the historical development of our present concepts of the etiology of this condition. We can only say that the most widely accepted concept is that it is caused by the rupture of a subpleural vesicle due to (1) a congenital cyst, (2) a valvular

*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 25, 1939*

CHART 1

Age	Lost Time	Weight	Recurrence	Demonstrable Pathology	Type of Onset	Follow-Up	Elapsed Time
20	None	OK	None	None			12 yrs.
25	7 days	-37 lbs.	None	None	Acute—light work		2 yrs.
25	4 wks.	Normal	None				
25	2 wks.	-31 lbs.	None	None	Acute—sitting at desk		10 mo
22	4 wks.	+20 lbs.	None	None	Acute	5 yrs.	8 yrs.
21	2 wks.	-30 lbs.	None	Hilus thickened.		5 neg x-rays	5 yrs
				Obli. CPL			
25	3 wks.	-15 lbs.	3	Left apex thickened	Acute—light work	2 neg x-rays	1 yr
26	2 1/2 wks.	-13 lbs.		Hilus thickened	Acute—light work		6 mo
20	3 wks.	-20 lbs.	None	None	Acute with preceding cough	2 yrs.	4 yrs
24	3 wks.	-10 lbs.	None	Hilus thickened	Acute—light work	6 yrs	6 yrs
27	4 wks.	-12 lbs.	None	Hilus thickened	Gas pains	2 yrs	4 yrs
21*	8 wks.	-17 lbs.	None	Hilus thickened	Acute—light work	2 yrs	4 yrs
27	3 wks.	Normal	None	Hilus thickened	Walking—to work—acute	5 yrs.	6 yrs
35**	3 wks.	Normal	2	Hilus thickened	Lumbar pain following cough	6 mo	6 mo
37	1 1/2 wks.	Normal	None	Silicosis	Acute—light work	5 yrs	5 yrs
21	3 wks.	Normal	None	Left apex thickened	Following cough	6 yrs.	6 yrs
19	None	Normal			Riding to work	2 1/2 yrs	2 1/2 yrs
20	2 wks.	-15 lbs.	None	None	Flopping in chest	8 mo	
31	3 wks.	-24 lbs.	2	None	Flopping	2 yrs.	2 yrs.
32†	6 wks.	-20 lbs.	3	Bullae	Severe RUQ pain—abdominal emergency	3 yrs	3 yrs
24	2 mo	-10 lbs.	None	None	Walking to work	1 yr	1 yr
30	5 mo	-16 lbs.	None	Hilus thickened		5 yrs	5 yrs.
32	5 days	-20 lbs.	None	Left apex ? Tbc.	Acute—moderate lifting	1 1/2 yrs.	5 yrs
25††	6 wks.	-36 lbs.	None	None	Acute—sitting at desk	5 mo	5 mo
23	3 wks.	Normal	None	None	Acute—yawning	1 mo	1 mo

\* A younger sister was examined for employment two months ago and apical active tbc was found. Other exposure outside the family was demonstrated.

\*\* K. R. First case discussed.

† F. J. Second case discussed.

†† D. F. Third case discussed.

Since the time that our original figures were submitted there have been no recurrences in this group and no evidence of acid fast infection in any member of this group.

emphysematous bleb, (3) a valvular scar vesicle. Each of these conditions has been found at postmortem in cases of this sort. It is seldom if ever associated with a general increase of intrapulmonary pressure. It is almost never found in emphysema. The vesicle is a localized affair produced by progressively increasing the pressure in an alveolus by a valvular structure at its outlet into the bronchiole until rupture of the visceral pleura occurs. With the ensuing collapse of the lung, the alveolus probably becomes obliterated by scar tissue, thus explaining the infrequency of recurrences.

The accepted classification of the cases is self-explanatory: (a) partial, (b) total, (c) tension—in which, through an extensive and continuous valvular action, the intrapleural pressure is increased so that the mediastinum is markedly displaced, thereby causing circulatory embarrassment—thus, of course necessitates prompt action to relieve pressure, and the results of treatment are dramatic; (d) recurrent, (e) bilateral.

## Summary

The 25 cases reported here illustrate the following points:

1 Spontaneous pneumothorax usually occurs in (a) young (19–35 years), (b) underweight (two-thirds of this group was underweight from 10 to 37 pounds), (c) males (in the ratio 24:1).

2 It should be suspected in any acute pain in the chest, upper abdomen, or back. The acute onset at times may suggest an acute cholelithiasis, a renal calculus, angina pectoris, or perforation of a peptic ulcer.

3 It is seldom associated with any unusual physical exertion, but in our experience it is never symptom-free as we have never found it in a pre-employment examination.

4 Diagnosis may be made by physical signs, but this condition can be ruled out only by superlative radiographs taken in forced expiration as this in our experience is the only way in which small collections of air can be demonstrated. Fluoroscopy is of little use except in marked cases.

5 Usually it requires no treatment beyond bed rest. Occasionally in the "ball valve" or tension type, it is necessary to remove some air by paracentesis.

6 Tuberculosis should be suspected but is only rarely associated with this condition. Even in the presence of radiographs indicating healed tuberculosis foci, long periods of hospitalization are an unnecessary hardship for the patient. Tuberculin reactions are very useful. Tuberculin tests made with 0.1 cc of  $1/1000$  O.T., May 1 to 5, on 15 of the above cases (the rest have either left town or are no longer employed) gave the following results: No reaction, 7 cases, mild reaction, 6 cases (3-5 cm erythema at

forty-eight hours), positive, 2 cases (5-8 cm erythema with induration at forty-eight to seventy-two hours).

7 Loss of time ranged from none to five months, the longest disability being in a patient with a suspicious apical scar—five years ago. Average lost time 3.84 weeks.

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### THE BACH CHROMOSOMES

Because there were forty-nine good musicians, twenty of them noted, in seven generations of the Bach family it has been very generally considered to be, as one writer states, "the most remarkable instance of hereditary genius in all history." It certainly looks like it, says Dr. Gilbert Cottam in *Minnesota Medicine*, but one can't help but wonder if environment did not play an important part in the production of this remarkable situation.

They lived in an atmosphere of music, for Thuringia, where they were born and lived from generation to generation, was traditionally musical, and close by, in Saxony, was the most famous organ building district in the world. Then, from old Veit Bach, the baker who only played the zither in his spare time and died in 1619, down to the last Bach of any musical consequence, in a period of two hundred and fifty years, they lived in their own family atmosphere of music teaching their younger

brothers and sisters, their children and their children's children.

In this firmament of musical talent appeared a star of the first magnitude, the great Johann Sebastian Bach. In his period all musical instruments were still very primitive, as compared with those of today, and it is difficult to understand how he, thus handicapped, could produce music which today stands unmatched, at the very top. His preludes and fugues for the organ call for all the resources of the modern instrument and only a few performers can really play them. He was the father of twenty children, only two of whom became well known in music. In another hundred years the strain died out.

The question of environment is interesting in connection with this unique group of talented people and its single genius, but again we are puzzled when we think of the many others whose genius survived the most uncompromising obstacles. Perhaps it is the chromosomes.

### LINIMENTS DO NOT HEAL

Liniments have few, if any, healing qualities when applied to sprains, although they may relieve the pain, the January issue of *Hygeia*, *The Health Magazine* states. The best treatment for sprains is complete rest for the injured part.

Liniments are not as important in medical practice as they formerly were. They are still used frequently, however, for sore and stiff muscles and stiff joints, but the main benefit is due to the rubbing. Their effect is due principally to their tendency to evaporate quickly, which causes cooling, moderate irritation, and excess of blood.

### NEW KIND OF QUILTING PARTY

The little town of Arnold, Nebraska honored two physicians who had practiced there many years in a novel manner, as reported in their state medical journal. Through efforts of members of the Ladies' Aid Society of the Baptist Church, two quilts were made, upon each of which were embroidered the names of 300 people, present or former residents of the community, and at whose births either Dr. Burnham or Dr. Dunn was the attending physician.

These quilts were presented to Dr. Burnham and Dr. Dunn on January 18, in the social rooms of the Baptist Church, to which everyone in town was invited.

# INSTITUTIONAL CONVALESCENT CARE FOR SURGICAL PATIENTS

I S RAVDIN, M D , \* Philadelphia

(Harrison Professor of Surgery and the Director of the Harrison Department of Surgical Research School of Medicine, University of Pennsylvania)

THE relatively recent intelligent interest of surgeons in the question of convalescent care has come about, we believe, because of a fundamental change in the practice of surgery. In the past the majority of surgeons considered convalescent care as a means to free hospital beds for acutely ill patients. Rapid turnover meant a relative increase in bed capacity. At a time when the operation was considered the major part of surgical therapeutics, available hospital beds were of the greatest concern to the surgeon, since these meant a greater number of operations. When, however, surgeons began to realize that further reduction in morbidity and mortality could be accomplished only by a more carefully planned period of preoperative treatment and by exacting individual postoperative care, interest in the patient as an entity increased. All patients were not prepared alike prior to operation and all were not taken care of by a standardized regimen after operation.<sup>1</sup> "That patient with the gastric ulcer" became "John Jones, who has a gastric ulcer." Each patient, both before and after operation, became an individual problem and thus provided a closer relationship between the surgeon and his associates and the patient.

The development of the follow-up clinic brought an even clearer realization that many of the patients discharged from our surgical wards required something more than they were receiving and that a regulated period of transitional

care was necessary if they were to be restored fully and rapidly to health and economic stability.

To the hospital administrator, convalescent care was frequently purely an economic measure. It freed the hospital of the patients who no longer needed specialized surgical and nursing care and thus reduced costs. The patients were not ready to return home but rapid turnover of beds meant that the hospital might be of greater service to the community. Such a program required the transfer of these partially recovered patients to some institution providing convalescent care.

The past emphasis on the economic values of convalescent care naturally had as its outcome a lack of intelligent interest in the planning of the institutions for convalescence, and there are few quantitative studies available from which we may draw exact information as to the value of such care and the type of organization best suited to provide transitional medical and surgical treatment. It is to be hoped that this conference may bring forward for discussion the requirements from the medical and surgical points of view and point out the value of carefully controlled studies during the convalescent period. We shall confine our remarks to the medical and social aspects of convalescent care as we have seen them on the surgical service of the Hospital of the University of Pennsylvania.

There comes a time in the recovery from many operations when active surgical and nursing care are no longer required but when it is still not possible to consider that the surgical episode has

\* I wish to thank Miss Ruth J. Peterson who has been the medical social worker on my service in the Hospital of the University of Pennsylvania for several years for her help. Much that I have learned about medical social work and the responsibilities of the surgeon for convalescent care I owe her.

come to an end. The operation and the period of hospitalization must be looked upon as only a part of the treatment necessary for the restoration of health. As Dr Corwin has said "The aftermath of a period of hospitalization is too often accompanied by moods of depression or of self-importance which are best combated by a change of environment and an application of recreational therapy, involving intercourse with others who are similarly in need of reparative and harmonizing guidance and stimulation."<sup>2</sup> The current practice of affording the very best of therapeutic management during the acute phase of surgical illness and of adopting a *laissez-faire* attitude during the period of final rehabilitation is one of the anachronisms in the management of the majority of our patients who have had ward hospital care.

The patient who, only a few days previously, has had a thyroidectomy for hyperthyroidism may at the time of discharge have a normal basal metabolic rate and a normal pulse rate, but he or she has had a long period of undernutrition and has been left with a hyperirritable nervous system, a heart sorely taxed by overwork, and perhaps muscular and vascular changes. Can those hyperthyroid patients, who frequently have required or should have had the assistance of a trained social worker in working out their social and economic problems prior to hospitalization and operation, return to the environment from which they come? It is our opinion that they cannot. Even those patients who do not belong to what we call the "charity group" have done better when for a period of from two to six weeks following discharge from the hospital they have been provided with special care, removed from the pressure of everyday life. Although we have no significant data to prove the point, we are of the opinion that planned convalescent care at such a period reduces the incidence of persistence or recurrence of symptoms. The profound psychosomatic readjustment that these patients must frequently make

can rarely be made in the same environment in which they lived during the progress of the disorder.

Many of these patients have lost from 25 to 35 per cent of their normal body weight. To send them to a home in which undernutrition is a chronic family state is to invite trouble, for as Weiss and Wilkins<sup>3</sup> have shown, malnutrition may be a precipitating factor in the onset of the disease. A vitamin B complex deficiency mimics in many ways the symptoms of hyperthyroidism so that even though the major portion of the hyperfunctioning gland has been removed certain of the cardinal features of hyperthyroidism will persist as a part of the nutritional deficiency if this is not corrected.<sup>4</sup>

The patient who, only a few weeks previously, has been subjected to a partial gastrectomy for gastric or duodenal ulcer may, at the time of discharge from active surgical care, have been freed from pain, heartburn, indigestion, and vomiting. But he is not yet well, for he must continue on some type of diet, eat at frequent intervals, and forego smoking if the incidence of marginal or jejunal ulcer is to be reduced to the minimum. Can such a program be successfully initiated in the homes from which the majority of our ward patients come? Many of those suffering from gastric and duodenal ulcer have had nutritional deficits for a long time prior to operation.

There is a growing evidence of the fact that gastric and duodenal ulcer may be, from their inception, a visceral manifestation of a nutritional disturbance. If, then, recurrence is to be avoided, the patient must be returned to his environment without any evidence of a nutritional deficit.

The patients recovering from radical resection of the breast for cancer may not require special diet but they require a considerable period for the psychologic adjustment that is necessary following what they consider a mutilating operation. Where can this adjustment be made more promptly than among a group

recovering from a variety of illnesses who look forward to a fuller life?

The patient with a fracture, especially of the lower extremity, requires considerable care even after union has taken place. Massage, baking, diathermy, and planned exercises are important in the postsurgical care of patients who have had a fracture of one or more of the major long bones. They may no longer require hospital care, but if they are to be restored to economic security they require institutional care. It is a rare occurrence when these patients can be brought to the hospital for daily treatment, especially when every wage earner in the household is attempting to keep his or her job.

Convalescent care for orthopedic patients is of the greatest importance. In the Children's Seashore House at Atlantic City we have had a splendid place to send our children, but there is not available in the Philadelphia area an institution to which we can send adult orthopedic patients. Many of these patients require months of supervised care, but few of them require hospitalization. The value of supervised convalescent care during periods when hospitalization is not required is of the greatest importance. The value of this type of coordinated effort could readily be demonstrated in any orthopedic clinic.

Operations for rectocele and cystocele are among the commonest done in every gynecologic service. These lesions are in reality a form of herniation. When the general surgeon repairs an inguinal or incisional hernia he advises a period of from two to four months during which no heavy lifting must be performed. Yet every day, women are being discharged from our hospitals and permitted to go to homes where from the start they must do work which vitiates the chances of a successful outcome of the operation.

The majority of patients approached by us in regard to convalescent care know very little about the convalescent homes in our community. As a rule, they have little idea of their function in

expediting recovery. To many of them the mere name "convalescent home" implies an extension of "charity" which many are loathe to accept. Help on the basis of health is easier to accept than help on the basis of economic need. One patient who at first refused convalescent care said she associated the word "home" with an institution such as an "orphans' home." Others have refused convalescent care because they have been told that the patients talked about nothing but their health, their operations, and their domestic and economic problems. The wise use of occupational therapy and supervised recreation is found in too few of our so-called convalescent homes. If convalescent care is to be productive of its best results, these problems must be intelligently met.

A greater and more frequent objection is that by going to a convalescent home they are going too far away from their doctors and their families. In the effort to place our convalescent homes in the most favorable locations we have too frequently made the patients inaccessible, not only to those who have been responsible for their surgical care but to members of their families from whom they do not wish to be completely separated.

It is a relatively simple matter to give the patient a clear description of what a period of convalescent care may mean to one recovering from a surgical operation. Even when convinced that a period of transitional care, devoid of anxiety and the pressures of everyday life, is of importance, many patients still complain that convalescent care means a continuation of institutional life of which they have had enough. The practice in the past of housing all patients in one or two large buildings has tended to continue the general idea of institutional care, while the cottage system, which, we believe, should be extended, tends to create a different attitude in the patients and aids in making them assume minor responsibilities at an earlier period in their convalescence. Florence Nightingale expressed this well in her *Notes*

on *Hospitals*<sup>5</sup> "The first necessity of a convalescent hospital is that it should not be like a hospital at all, and the very best kind of convalescent hospital would be a string of cottages. The reasons for this are (1) To get rid of the idea of being in a hospital altogether from the minds of the inmates, and to substitute for it that of home, and (2) to secure a more free and bracing atmosphere than can ever be secured in any building containing a larger number of inmates."

When attempts are made to interpret convalescent care as an extension of surgical care, we too frequently are confronted by the patient's statement that new doctors will not be familiar with his condition. There is much to be said for this point of view. During the period of recovery from the operation the patient has learned to depend upon the surgeon, his assistants, and the house staff. If the illness has been a serious one, the patient frequently believes that he must not be too far removed from the surgeons who have taken care of him. The humanizing influence in surgery may here have its drawbacks. But would it not be better if the convalescent home were not twenty to thirty miles from the hospital but close enough so that twice or three times a week some member of the staff that has taken care of the patients in the hospital could visit them? A desire to return home too frequently causes the patient to refuse further hospitalization under any name.

Convalescent facilities are not always available and are often totally lacking for certain groups, such as the Negro. It is sometimes necessary to arrange makeshift care in the patient's home. This is particularly true of the adult Negro. In Philadelphia there are no convalescent homes for the adult Negro male and only one small home in a crowded section of the city for the care of Negro women. This is appalling when one realizes that 11 per cent of the population of the city of Philadelphia is made up of Negroes and that many of these come from the slum areas with the

greatest overcrowding and the poorest housing.

Another group of patients who could profit from convalescent care is excluded from existing convalescent hospitals on the basis of diagnosis. The neurosurgical patient who is learning again to walk and talk and to take care of himself is rejected. This is true partly because he is sometimes depressing for others to see, but largely because the convalescent hospitals are so understaffed that they are unable to give the individual care that these patients frequently require. Only private nursing homes are available, and few patients can afford to pay \$15 to \$20 per week, the minimum necessary for this care. The surgical patient who has tuberculosis, other than the pulmonary type, is always rejected by the convalescent hospital and inevitably must return to a home that all too frequently is poorly equipped to give him any of the protective care he requires.

Some thought should be given to the handicap a patient on relief has in facing a surgical episode. As yet no extensive use is made of convalescent homes for "building up" the patient prior to operation. The cost of the depression in terms of lowered resistance to disease can possibly be guessed at. It seems valid to make a greater use of convalescent homes for the purpose of preparing the patient mentally and physically for the ordeal of surgery whenever possible. A splendid example of this use of preoperative care occurred recently in our hospital. B S, a white girl, aged 12, has been under the supervision of the hospital for several years with a diagnosis of bronchiectasis. The family has been on relief for a number of years. At no time during the last few years has this family had sufficient food and clothing to protect normal health. The special care that the girl needed was impossible for the family to manage. Early this spring, B S was sent to the Children's Seashore House for preoperative building up. She remained there four months, gained 20 pounds, and was admitted to the hospital ward in such excellent

physical shape that it was a real question whether or not to do a lobectomy. In view of the history of the disease and the child's excellent physical condition to withstand such an operation at this time, a lobectomy was done, and the patient is now making a rapid recovery.

Many of the factors contributing to surgical morbidity and mortality could be eliminated by improving the nutrition of patients who are to have elective operations prior to their admission to the hospital. The disruption of abdominal wounds may be due to a vitamin C deficiency or to hypoproteinemia.<sup>6</sup> The hemorrhagic tendency of patients with serious liver disease is due to a vitamin K deficiency conditioned by an absence of bile salt in the intestine.<sup>7</sup> These and many other conditions could be corrected by intelligent preoperative care. Would it not in many instances be better to carry out this preoperative program among patients convalescing from the very operations to which the patients who are being prepared will have to be subjected? The psychologic effects of this can hardly be measured now.

At certain times of the year, care in a convalescent home in most communities is not possible for many patients because of long waiting lists. This is particularly true during the months of July and August when the convalescent home is also frequently used as a vacation home. This is unfortunate in view of the fact that many patients needing the specific services of a convalescent home are unable to have this care during the summer season. The recent study of convalescent homes in the Philadelphia area under the auspices of the Council of Social Agencies discloses the provocative information that during the months of March and April, when hospital wards are filled to capacity, the convalescent homes are less busy than at other times of the year.<sup>8</sup> The wide differences in the type and quality of services offered by convalescent homes limits the number available for surgical patients. One home may not be equipped to do dressings, several have no elevators, and a few

require the patients to do all their own laundry and help with the housework.

For a few patients, good care at home is possible where the economic level is not below a healthful standard. For the majority of our surgical ward patients good convalescent care at home is not possible. We have conservatively estimated that 25 per cent of the patients discharged from our general surgical service are in real need of transitional care while approximately 38 per cent would be better off could they obtain it. These requirements cannot be met in a community which now has available but 360 beds for adult convalescent care for all purposes. During the fiscal year 1938 more than 15 per cent of the surgical ward patients were on relief. As you know, the relief standard is not a standard to maintain health but is little more than a subsistence level. To return patients to a home where the only income is a small relief allowance is to know that complete recovery is retarded by economic vicissitudes.

It is a matter of great concern to the surgeon who believes that surgery is an art and not a craft that the results of his work should permanently benefit his patients. To discharge a patient alive after a serious surgical lesion has been removed is only a small satisfaction. To see the patient six months or a year later in the follow-up clinic restored to health is the real reward. This entails in every instance proper care after leaving the hospital and it is for this reason that surgeons must lend their interest and support to the establishment and maintenance of adequate convalescent institutions.

The convalescent institution that will serve the needs of the surgical patient should provide, on occasion, special nutritional care prior to operation and care between stage operations where the period between operations exceeds one month and where it is felt that convalescent care offers more than hospital care. In addition, the convalescent home should provide for minor dressings, physical and occupational therapy. It



should be so situated as to offer the advantages of the open country but should not be so far away that members of the staff responsible for the original care of the patient cannot visit the institution at regular intervals. If these provisions are met there will result a greater increase in our interest in these institutions, and they will be of wider usefulness to the patient and the hospital.

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# Public Health News

## Antipneumococcus Serums of All Types for Positive Blood Culture Cases

**A**NTIPNEUMOCOCCUS serums have been available for types I, II, IV, V, VII, VIII, XIV. As an additional service, effective immediately, antipneumococcus serums, rabbit, will be supplied on request for the treatment of cases with positive blood cultures of the remaining types\*. These serums will be available for immediate distribution from the Central Laboratory in Albany, and the Branch Laboratory, 339 East 25th Street, New York City. Requests should be telephoned or telegraphed and should state the type and that the serum is for a case from which a positive blood culture has been obtained.

In connection with its study of pneumococci, the Division of Laboratories and Research will greatly appreciate receiving transplants of strains isolated from blood cultures from patients for whom serum of any type is furnished.

Further information relating to antipneumococcus serum may be obtained from custodians of supply stations, district state health officers, or the central laboratory and its branch.

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\* Except for types XXVI and XXX which are considered closely related to or identical with types VI and V, respectively.

## CONVALESCENT CARE—A PERPETUAL CHALLENGE

E H L CORWIN, New York City

(Executive Secretary of the Committee on Public Health Relations of The New York Academy of Medicine)

IN A world as animated and as "spasmodic" as the present there is need of mental poultices to preserve our endocrine balance.

In a civilization unfolding as rapidly and exhaustively as ours in which sets of the *Encyclopedia Britannica* are given away with ginger ale, in a world in which medical and other textbooks and dictionaries and cyclopedias become obsolete within a year or less, we need strong tethers or anchors to hold onto to save us from being drowned in the swirling whirlpools of ever accelerating change. Unfortunately, there are but few such towers of strength left, and among these fortresses of imperturbability, these bulwarks of inaction, these oases of placidity and immobility is the institution of convalescent care. Of all living and striving things in this highly dynamic, inter-related, robust existence of ours, it has remained almost completely static and isolated and anemic.

The prescientific doctor was its father and old-fashioned charity its mother. As medicine entered the realm of science, in the flush of its new enthusiasm it forgot this child altogether, and the good old dame charity became "social welfare" and tramped and gyrated alongside the scientific and haughty medical diagnostician. This sad story of parental neglect deserves an investigation by the Court of Domestic Relations. The medical profession during the period of its therapeutic nihilism has paid little attention to the care of the convalescent, the doctors were chasing the scientific rainbow, and, with the aid of all kinds of chemists and biochemists, physicists and biophysicists, biologists, bacteriologists, mycologists, zoologists, physiologists, psychologists, and what not, they piled up test upon test, measuring device upon measuring device, until they became almost dizzy

with them. They are just beginning to realize that during their scientific explorations they have neglected some of their immediate responsibilities.

Convalescent care is the unfinished business of medicine. Unless the medical profession will look upon it in that light, it will continue to remain the "third estate" among the institutions for the care of the sick—a reproach and a continuous challenge.

The doctors, however, are not the sole offenders. How about the philanthropists, the social workers, the "philanthropoids," the trustees and administrators of hospitals and of convalescent homes, the official health and social welfare authorities? Haven't they likewise overlooked an important community responsibility and haven't they failed to provide adequately for a recognized sociomedical need?

Negligible as is the medical literature on convalescence, it assumes Gargantuan proportions when compared with the socioeconomic and administrative writings on the subject. The latter practically do not exist at all.

We have a few medical studies of the essence and value of convalescent care for different types of patients under different conditions, but none on the administrative side. The standards formulated fifteen years ago by the Committee on Public Health Relations of The New York Academy of Medicine, which, by the way, are the first in the annals of medicine, have never been tested out. No attempt has been made in this direction either by the convalescent institutions themselves or by state or voluntary welfare agencies. No one has seemed to care.

Only here and there has an attempt been made to determine the extent of the need for institutional convalescent

care Years ago Dr Brush of the Burke Foundation proposed a pragmatic gauge that was followed by many for a number of years A more scientific approach was developed by Miss Waters while she was still at Baltimore, and recently Miss Gardiner endeavored to measure the need in Philadelphia on the basis of the sampling method We know that the demand is elastic depending on many factors the awareness of the physicians, the keenness of the social workers, the season of the year, the reputation of the homes themselves, the methods of admission, and many other conditions

In spite of the fact that one-half of the convalescent home facilities in the United States is available for New York City residents, less than 6 per cent of our hospital ward patients gain admission to these homes And yet, paradoxically enough, the utilization of the convalescent homes taken as a whole does not exceed three-fourths of their capacity The special institutions are fully utilized, but the general care homes are far from being so On the face of it, it indicates that "something is rotten in the State of Denmark" It reveals a lack of community organization and the unpopularity of many of the homes It also reflects the difficulties encountered by many types of patients in gaining admission The homes are very "choosy" and maintain a negative social attitude—they will admit only those patients who are certain not to be a nuisance, who are not difficult to handle, who do not require special diets, or dressings, or other services With several notable exceptions, the convalescent homes seem to have proceeded along the line of least resistance—to admit only patients who require the least care and whose maintenance is the least expensive

*It is the convenience of the homes that counts and not the needs of the patients* Of what value are enlightening medical discussions and social-work efforts if there should be no disposition on the part of the trustees and managers of the convalescent care institutions to meet recognized community needs?

In a heterogenous society such as ours, there are many additional complicating factors on which I shall not dwell today and which require a commonly arrived at point of view and a social, not an individualistic, policy

Institutional convalescent care is a recognized complement to hospital care under existing conditions of our modern city life. It is because of this recognition that we have 58 convalescent homes with a bed capacity of 4,040 serving the people of New York City All of them, as well as the Speedwell units which provide foster homes for children, are maintained by voluntary effort Aside from a day camp for convalescent patients opened on July 10 of last year, our municipality does not maintain a single convalescent institution It contributes, however, about \$350,000 annually toward the maintenance of needy patients By insisting that certain minimum requirements be met by the convalescent homes before they can qualify for the city subsidies, the City Department of Hospitals has helped to raise the standards of convalescent care and has set a precedent to be followed by the several community agencies which annually raise funds for welfare work One rule insisted upon by the New York City authorities calls attention to a characteristic example of the existing lack of coordination between the hospitals and the convalescent homes The city will not pay for a patient unless he is admitted to a convalescent home within *ten* days after his discharge from the hospital Let us pause a minute to consider the situation as revealed by this rule Why is a patient sent to a convalescent home? Presumably because he is still feeble and needs further care which he cannot obtain in his squalid tenement home The woman discharged from the hospital after a severe abdominal operation may be living on the fourth floor of a noisy walk-up and on her return home she may be met by responsibilities of the household altogether too strenuous for her present condition and yet, although our institutional convalescent facilities are not fully utilized during many months

of the year, she often cannot obtain admission immediately upon discharge from the hospital. The patients are altogether too often required to trot around to the various admission offices to be medically examined and "welfarely" investigated before they can be admitted. This is an indictment both of our convalescent home authorities and of our medical social-service workers as well as of our so-called coordinating agencies. There is an imperative need for the synchronization of the discharge of the patient from the hospital with his admission to a convalescent home. There are numerous rules and regulations, some on the part of our relief authorities, some on the part of the city hospital authorities, and some on the part of the homes themselves, which stand in the way of achieving such synchronization. Small wonder that the convalescent homes are not fully utilized in the face of an enormous demand for their services!

It has been well said that "a place is not a convalescent home simply because it is in the country." The community must realize that patients recovering from certain types of illnesses require special care. A mere rest home is not enough for a great many of them. A better understanding of the term "convalescence" is, therefore, of practical moment, as it bears on the selection of patients for convalescent care. The lack of a precise meaning of the term may have contributed to the existing confusion.

The Medical Round Table of the Conference on Convalescent Care held recently at The New York Academy of Medicine found itself unable to come to any agreement as to the exact definition of convalescence, except to stress the need of a broad and pliable concept of it. The convalescent state following one type of disease is different from the convalescent state following another type of disease both as to the period required for the recuperative forces to assert themselves and as to the type of care necessary. In his masterful paper at the recent Convalescent Care Conference at The New York Academy of Medicine, Dr

O. H. Perry Pepper stressed the point that "not until we learn to recognize, in each type of convalescent, the actual abnormalities which persist from the preceding disorder and which differentiate that individual in convalescence from the same organism in health, can we properly meet the various therapeutic indications in each instance." This opinion needs emphasis because of the prevailing erroneous idea that everyone's convalescence is alike and that all that is needed for a convalescent home is a country boardinghouse where people can go for shorter or longer periods of rest without any particular medical care or oversight.

The present-day idea of convalescent care is that of a creative dynamic force, applied to persons recovering from either acute diseases, or operations, or from the exacerbations of chronic maladies, a force which brings into play all the resources of mind and body, of medicine and psychology, to offset the baneful somatic and mental effects of illness. It comprises play as well as rest, it invokes religious emotion and an appeal to reason, it calls for the exercise of mind as well as muscle, it furnishes comforts and stimulates purposeful effort, it provides dressings for surgical wounds and instills sound health habits, it aids the natural recuperative processes and develops social discipline, it expedites recovery and strengthens character. Its aim is restoration of the adult to a state of health, mental poise, and usefulness and of the child to the usual activities of childhood. Convalescent care saves, or should save, the patients the anguish of relapse and of a repeated malady, it saves, or should save, the communities the cost of preventable illness.

When properly conceived and managed, convalescent care is an important community health asset which should not be limited to the indigent or the near indigent alone. The clerk, the stenographer, the nurse, the teacher, the musician, the artist, the litterateur, constitute the forgotten legion of our times when provisions for social welfare are considered. For New York City there is but one home for

the large group of cultivated and genteel people of moderate income. By charging rates compatible with the earnings of these people, it may be possible to maintain convalescent retreats on a pretty nearly self-supporting basis, while the homes for the wage-earning groups must depend, like hospitals, on charitable endowments or tax subsidies or both.

It is not my purpose to dwell on the economic and financial problems of the convalescent care situation. They have figured altogether too prominently in all our discussions of the subject. I wish to point out, however, the folly of the present policy of some community chests to allocate funds for convalescent care to social service departments of hospitals instead of to the convalescent homes themselves. This method of fund allotment is all wrong in principle and in its application. It makes it possible for hospitals having larger funds at their disposal to purchase convalescent care for their patients irrespective of the needs of patients of other hospitals whose social service departments do not have as large sums at their command. Sound social policy demands that placement in convalescent homes should be based on the needs of the individual patient, irrespective of the hospital in which he happens to be treated during his illness.

While I am in the realm of finance, I should like to emphasize the desirability, although I know that it may not be possible of realization at the present time, of adding to the policies of the hospital prepayment plans a provision for convalescent care. To accomplish this it may be necessary to charge a slightly higher premium and make it a four-cent instead of a three-cent-a-day scheme for those who care to choose the more complete coverage. In Great Britain provision for convalescent care is a recognized feature of many of the contributory schemes. Such a provision may give the necessary impetus for the establishment of convalescent care institutions for the so-called white-collar class.

It is surprising that none of the legislatures, vying as they do with one another

in bringing the Eldorado down to earth by means of all kinds of tax devices, "ham and eggs" and what not, have not thought of amending our Workmen's Compensation Laws to provide convalescent care for those who come under the provisions of these acts. It would seem reasonable to do this and thereby reduce the average length of stay in the hospital, at the same time assuring the injured a better health deal than some of the fantastic schemes which are being proposed for the benefit of the wage earners.

Contemplating the convalescent homes of the future, I can't help but think that with modern change-about-face from the traditional fresh-air therapeutic views, as witnessed in the tuberculosis and other cognate domains, it is feasible that the convalescent homes of tomorrow may be built in locations more accessible than are the majority of convalescent homes of today, they may perhaps be fitted within the building compounds of our large hospitals. The only good thing I can say for such a tendency, should it develop, is the proximity to medical talent which it would entail. It is possible that this proximity will make for an intensification of interest in convalescence on the part of physicians, with the resulting recognition of convalescent homes as institutions of value for scientific investigations of disease in its involutional processes and for the teaching and training of young physicians. In a report made recently to the Board of Governors of the Institute of Medicine of Chicago by a special committee headed by Dr M. C. Gilbert, such a possibility is envisaged.<sup>1</sup> We may yet have centers for research in convalescence where thoroughgoing studies in the physiology, morphology, biochemistry, and psychology of the convalescent state at various age levels may be carried on.

The following suggestions which grew out of the Convalescent Care Conference in New York last November are perhaps of particular practical value.<sup>2</sup>

<sup>1</sup> Proceedings of the Institute of Medicine of Chicago Volume 12 No. 13 April 16, 1939

<sup>2</sup> The Proceedings of the Conference will be published in book form in the near future

1 The unmet convalescent needs, and these are numerous, should be considered by a planning board on which representatives of the convalescent homes, the medical profession, and the social service agencies should serve. The provision of convalescent care is a community responsibility and should be met on a community rather than on an individual basis.

2 With aid of community funds demonstrations should be set up in several of the convalescent homes of various types in order to determine the mode of operation which would be most conducive to bring about desired results, and what that would mean in terms of cost.

3 Either an official agency or a self-appointed body should review annually the work of the various institutions for the purpose of pointing out the ways and means of bolstering up the standards of performance.

4. Every institution should have a resident medical officer whose selection should be based not only on his medical training but on his understanding of the psychic and emotional problems of convalescent patients and his interest in the patient as a human being, and each institution should employ a dietitian to be responsible for a basic diet which would be adequate in all essential elements and to provide for the types of special dietaries recommended for various nutritive deficiencies. Small institutions should either merge or provide these essential services in some cooperative way. Patients convalescing from disturbances which are frequently accompanied by temporary psychic imbalance, such as those recovering from thyroidectomies, operable carcinomas, or peptic ulcers, should be sent to institutions which have adequate personnel.

5 An adequate medical résumé should accompany the patient in his passage from the hospital to the convalescent home. It should objectively describe all of the patient's deficiencies upon discharge from the hospital and should include a social service report on the pertinent environmental and psychosomatic factors. This résumé should be kept dur-

ing the patient's stay in the home and upon his discharge it should be sent back to the hospital from which he was referred. It is thought that such a requirement on the part of convalescent institutions might afford proper guidance to the convalescent home authorities and have a favorable effect on the quality of the records kept in the referring hospital. When a hospital owns a convalescent home, it may be desirable for a complete hospital record to accompany the patient upon admission to the home.

6 While it is unnecessary for the convalescent institution to duplicate the services which are provided by the social service department of the hospital, some cooperative arrangement should be made whereby the convalescent home might inform the hospital social service department of personal and environmental conditions that have been discovered during the patient's stay in the home. There is need of an educational follow-up policy on the part of the social service departments of the hospitals whereby the patients and their relatives would be instructed in their own homes as to the best care that can be provided with the facilities at hand.

7 The rules of admission to all institutions should be so ordered as to preclude the necessity for a hiatus between the hospital and the convalescent home.

8 All policies which tend to fix the duration of convalescent stay should be abandoned in favor of more flexible rules which permit the variation of this period to accord with the time necessary for complete optimum restoration.

9 While the establishment of some definite relationship between those charged with the medical care of the patient in the hospital and in the convalescent home is recognized as frequently desirable, this relationship would be better worked out by actual experiment rather than by arm-chair pronouncements.

10 In order to keep the authorities of the convalescent homes in touch with the advances in the field of convalescent care, a central committee of physicians and others should be created to review

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10 In order to keep the authorities of the convalescent homes in touch with the advances in the field of convalescent care, a central committee of physicians and others should be created to review



current progress in this field. This committee should sponsor an annual conference at which representatives of the institutions might present the problems which confront them.

11 Special institutions are needed for the care of certain types of convalescents.

12 Ordinary facilities of the convalescent home are unsuitable for the care of patients recovering from psychiatric conditions. Such care should be provided in a modified type of hospital. Convalescent facilities should, however, be provided neurologic patients for whom there is reasonable assurance of improvement. At the present time there are practically no facilities for posthospital care of patients who have had operations for brain tumor and for whom a certain amount of improvement is to be expected. Several conditions in the dismal realm of neurology which were considered hopeless a few years ago are now said to be benefited or cured if given proper care over extended periods of time. Among these are deficiency states, such as subacute combined sclerosis, pellagra, and some forms of neuritis, other remediable conditions include chorea, myasthenia gravis, and some muscular atrophies. Convalescent institutions for neurologic patients should be rather more elaborate with regard to equipment and personnel than is necessary in general homes. Equipment for hydrotherapy and physical therapy should be provided, and a great deal of emphasis should be laid on recreational and occupational therapy as well as on the selection of the proper type of physical therapist and occupational therapist.

13 In the case of orthopedic patients the concept of convalescence should extend beyond the patient's stay in a convalescent home. A physical handicap may make it necessary for the patient to find a new outlet for his economic usefulness. A complete orthopedic convalescent program should, therefore, include training to fit the patient into a new occupational pattern. Vocational training is hardly possible in a convalescent institution unless it is of a specialized type.

14 Home rather than institutional convalescence should be provided for the woman who has had a baby. Visiting practical nurses and housekeeping aides may be the solution of the problem.

15 Children under four years of age should not be placed in convalescent homes. For them foster home care is preferable.

16 Convalescent care should have a preventive as well as a recuperative aspect. A preventorium is as important as a sanatorium. A blood transfusion may be as important before an operation as it is after, and at times even more so. A period of upbuilding in a convalescent home prior to an operation may be an important factor in the outcome of the operation.

I shall not go on burdening you with details. We know we have a big unsolved problem before us, and we must muster every device of strategy and organization to put convalescent care "on the map" so to speak. It is a community responsibility in which all are equally concerned, but it seems to me that it is up to the social work agencies and to the medical profession in particular to provide the impetus and guide the direction.

### THE BRASS TACKS

A spinster social worker called on a negress who had a family of eleven or twelve children and was expecting another. Of course she had a very difficult time feeding and clothing her brood and the social worker was moved to say,

"Mandy, what you need is birth control."

"Oh, no, Miss Smith," Mandy replied, "that's all right for you, but I'se married"—*Illinois M J*

### METABOLISM—ENDOCRINE GLANDS

An important address on "Recent Research on the Control of Metabolism by the Endocrine Glands" was delivered on February 7 before the Greater New York Dietetic Association at the New York Academy of Medicine by Dr. Cyril Norman Hugh Long, Sterling Professor of Physiological Chemistry of Yale University. It will appear in an early issue of the *Journal of the American Dietetic Association*.

## CLINICAL ASPECTS OF SYPHILIS CONTROL

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(Director Division of Syphilis Control, New York State Department of Health)

**I**N A broad sense the clinical aspects of syphilis control relate to nearly every phase of the problem inasmuch as control of the disease depends upon early diagnosis and treatment of cases. I shall not attempt to discuss the entire subject. My remarks will be limited to certain problems that to my mind are of greatest importance in New York State, namely, the provisions for clinical facilities and the interpretations of public health officials and of the practicing medical profession as to what constitutes adequate treatment.

The diagnosis of syphilis is essentially a laboratory problem. The manifestations of syphilis may simulate many other conditions so that diagnoses based on clinical observations alone may be erroneous. Through the Division of Laboratories and Research of the State Department of Health and a system of approved laboratories, facilities for dark-field examinations and serologic tests are provided throughout the state, so that laboratory confirmation is readily available. There are, however, certain areas in which specimens must be sent long distances for examination. There is a definite need for improving the situation in these communities.

Provisions for the treatment of syphilis cases present a more difficult problem. It is essential to the success of the program that treatment facilities be available in every locality. Whereas laboratory specimens may be sent away for examination, facilities for treatment must be convenient to the patients. Since the majority of cases occur in the lower income group, it is necessary that treatment be provided largely at public expense. In the development of these

facilities each community must be considered individually with the view of giving the best service possible at a minimum cost.

The establishment of clinics has been found more satisfactory in larger communities. Because of the greater incidence of syphilis in these areas with a correspondingly larger number of patients who must be cared for, it is impossible with the funds available to provide treatment by other means. It is important, however, that these clinics be so organized and managed that the rights of practicing physicians are not infringed upon. Care must be exercised in the acceptance of clinic patients. Clinics should accept any patient for diagnosis and emergency treatment, any patient referred by a private practitioner whether for consultation as to diagnostic or therapeutic problems or transferred for treatment, and all patients unable to pay for care at the hands of private physicians. If these rules are adhered to, there should be no conflict between the clinic and private practice. Patients who can pay will usually seek private care rather than submit to the inconvenience, delay, and possible publicity of clinic attendance. It must be remembered, however, that antisyphilitic treatment is expensive and that many persons who can pay a physician for an occasional office visit cannot pay for weekly treatments over a year or more. In judging whether or not a patient is eligible for clinic care, this fact must be borne in mind.

Syphilis clinics should meet high standards with respect to quarters, diagnostic and treatment equipment, and personnel, both medical and nursing.

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*Read at the Annual Meeting of the Medical Society of the State of New York,  
Syracuse, April 26, 1939*

point of view of permanency Although a vacant room in a fire station or the city hall may be suitable for immunization or other clinics to which the patient may make occasional visits, makeshift quarters have no place in the treatment of syphilis in which patients must make regular weekly visits over long periods of time Adequate comfortable waiting rooms and sufficient examining and treatment rooms to provide prompt service and relative privacy are necessary Rooms should be light, airy, and attractive If possible, the clinic should be located on the first floor

Clinic equipment need not be elaborate Examining and treatment tables, a sphygmomanometer, stethoscope, ophthalmoscope, vaginal speculum, spinal puncture needles, syringes and needles for intravenous and intramuscular injections, sterilizers, and necessary reagents for examination of the urine constitute the essential equipment Ready access to a dark-field microscope should be had, although this instrument need not be in the clinic itself Arrangements should be made for the performance of special examinations at other clinics or hospitals or by competent specialists

The clinic personnel should be competent, genuinely interested in their work, and sympathetic to patients Clinicians must be well versed in syphilology and technically competent to perform the necessary diagnostic and treatment procedures with a minimum of discomfort to patients It is important that patients be considered as individuals and not as "cases of syphilis" Each patient should have a complete physical examination prior to the institution of treatment, and the physician should be on the alert to *observe and record* the progress of the patient including changes in physical status, response to therapy, and treatment reactions, and should be capable of altering treatment accordingly

Nursing personnel must be capable of making the necessary preparations for the clinic sessions and assisting the physicians so that the work may be carried out without confusion. They should be fa-

miliar with the drugs used and should understand their preparation and administration Under no circumstances, however, should a nurse administer any drug except upon *direct order of the doctor* She should assist and not supplant the clinician

Clinic personnel should know their patients in order to overcome situations that may lead to delinquency It is well to know something of their work, their home environment, and mental makeup in order to anticipate difficulties that may arise and correct them before they occur Antisyphilitic treatment promptly relieves the symptoms and signs of the disease, and it is difficult for most patients to understand the necessity for more or less painful injections after they become symptom-free, particularly if clinic attendance is inconvenient A pleasant, cooperative attitude on the part of clinic personnel will do much to prevent lapses from treatment The prevention of delinquency is certainly far more satisfactory and less expensive than follow-up visits

In spite of the efforts to prevent it, however, lapses will occur, and, therefore, each clinic must provide for the investigation of these individuals and their return for further care

It is doubtful that syphilis clinics are practical in rural areas in which patients are widely scattered Patients in smaller communities hesitate to visit clinics for fear of publicity In addition, transportation difficulties and loss of time because of distances to be traveled prevent patients from taking advantage of clinic facilities As a result the number of patients who can be served by the rural clinic will be small and, therefore, the cost per treatment high Delinquency will be frequent because of inconvenience to patients, necessitating greater expenditures for case investigation

In view of these facts it is believed that treatment can be provided more efficiently and economically in rural areas by practicing physicians who are paid on a fee basis There are three methods by which this may be accom-

published in New York State first, provisions whereby the local health officer treats patients who are unable to pay, the expense being borne by the local board of health, second, provisions whereby treatment may be given by a practicing physician upon authorization of the local welfare officer, the expense being met by the local welfare district, with state aid, and third, provisions whereby a county board of supervisors may appropriate funds for the treatment of patients by private physicians on a fee basis, in which event, the county is eligible for state aid. It will be observed that under the first two provisions there is a dual responsibility of boards of health and welfare officials. This has, unfortunately, led to differences of opinion as to the division of responsibility, and, in certain instances at least, has made it difficult or impossible for patients to obtain authorization of treatment from either. There is a real need for close cooperation of the officials concerned and a clear definition as to the duties of each. Perhaps this could be settled by making boards of health responsible for the care of potentially infectious cases with the understanding that late cases would be treated at the expense of the welfare department. An alternative is the state-aid-to-county plan whereby all classes of patients would be treated alike. Regardless of the method, it is important that steps be taken to see that adequate care is given.

The syphilitic patient presents two important problems. He is suffering from an infectious disease that may be transmitted to others, and at the same time one that may result in serious manifestations in himself. Both problems have a single solution—adequate antisymphilitic treatment. When viewed from the standpoint of the public health, this term has a different meaning than when considered from the standpoint of the individual patient.

The health officer is interested in syphilis primarily as it relates to the population at large and is concerned with individual patients only to the extent

to which they may affect the masses. His duties are to prevent the spread of the disease through control of infectiousness and to prevent its late manifestations in the large number of infected persons. Because of the enormity of the problem it is impossible for the health officer to extend his activities to every case. It is necessary, therefore, for him to limit his program to those classes of patients in which the most good can be accomplished with the facilities at his disposal. Since infectiousness is more or less confined to the first few years of the disease, except for prenatal transmission and since treatment of these cases will not only render them noninfectious but will also arrest the disease, these are the patients who should receive first attention. For administrative purposes the New York State Department of Health defines "potentially infectious" syphilis as follows:

- (a) All untreated cases of syphilis, irrespective of the presence or absence of visible lesions if
  - (1) of either sex, and the infection is of two years or less duration, regardless of the patient's age, and
  - (2) females within the child-bearing age regardless of a longer duration of infection, until the menopause has been reached
- (b) All treated cases, if in either of the above categories and given less than the equivalent of twenty injections each of an arsphenamine and of a heavy metal within a period of two years

It is recognized that infectiousness may extend far beyond the two-year period and that these minimum treatment requirements will not take care of all patients. The great majority of patients, however, are rendered noninfectious after two years of time or by twenty injections each of an arsphenamine and a heavy metal compound, and it is reasonable to believe that if this amount of treatment can be given to all potentially infectious cases a decrease in incidence will result. This amount of treatment will perma-

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that laboratory workers are aware of the shortcomings of available methods and are constantly striving to improve them

In this respect, New York State is peculiarly fortunate. The State Division of Laboratories and Research has over a period of many years, constantly improved the reliability of serologic examinations for syphilis. The latest development, quantitative complement-fixation, has the scientific advantage of giving extremely accurate and delicate measurements of the reacting power of serum. Although requiring the readjustment to a new method of reporting, this should be no more difficult for the physician than changing the recording of temperatures from a Fahrenheit to a Centigrade scale. Accurate quantitation offers the possibility of advantages making this mental readjustment worth while. The ultimate value to the clinician can only be determined with the passage of years.

The function of the Public Health Laboratory in raising the standards of efficiency of clinical laboratories in the area served is coming to be recognized more and more as an important duty. Although the details of methods have varied, the demand that such control be assumed by states and larger municipalities is growing rapidly. The careful administration of whatever method may be chosen cannot but be beneficial to the physician who must diagnose and treat syphilis.

In conclusion, I wish to re-emphasize the role of the laboratory as an aid to the clinician in the diagnosis and treatment of syphilis.

Dr Theodore Rosenthal, *New York City*—The title of Dr Brumfield's paper is a most appropriate one, as it indicates that, in fact, the principal factor in syphilis control is the medical one. Consideration of this takes us back to the medical school where the student should be taught not only the medical aspects of syphilis, but also its public health aspects.

When the student completes his medical course and as a young practitioner leaves his hospital internship to begin practice, he should be acquainted with his duties, responsibilities, and obligations to the public health authority in connection with his handling of patients with one of several communicable diseases in which the community has a real interest.

In connection with the laboratory diagnosis of syphilis, it is interesting to mention Colonel Harrison's experiences, as related in a recent

issue of the *Journal of the American Medical Association* in which he found viable spirochetes in capillary tubes containing chancre fluid after seventy-five or eighty days.

In New York City the standards of economic eligibility agreed to by the five county medical societies are used in health department clinics. As a matter of fact, it is our aim to distribute the burden of patients to the physicians in the community by referring patients to doctors' offices rather than increase the case loads of individual clinics.

The selection of proper medical and nursing personnel is, of course, most important. Physicians in charge of venereal disease clinics should be not only professionally competent, but should have administrative and executive ability in order to discharge their duties properly. Physicians only administer antisyphilitic drugs and take blood for serologic examination in the clinics operated by the New York City Department of Health.

The importance of a friendly and pleasant attitude by clinic personnel cannot be over-emphasized, as Moore has said—"a smile in the clinic is worth two follow-up workers."

The necessity of familiarity with the standards of infectiousness and "potential infectious syphilis cases" has been emphasized by the administration of the premarital and prenatal examination laws. The standards in New York City are the same as those of the State Health Department.

In conclusion, the reciprocal relationship of the various factors in any syphilis control setup can be briefly summarized as follows:

The responsibility of the patient is to submit to treatment by a physician, to conduct himself so as not to cause spread of the disease to continue under treatment until discharged by the physician, etc.

Duties of physician to report to the health department persons infected with syphilis and gonorrhea, to instruct patient, to give patient optimum number of treatments, to promptly report lapsed patients.

Duties of health authority to protect the confidential nature of all reports and records, to enforce provisions of the sanitary code dealing with examination of persons infected with venereal disease, to require hospitalization for infectious cases where sanitary code regulations are not complied with, to supply free drugs to physicians, postgraduate instruction and consultation service to practicing physicians.

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nently arrest the disease in most cases. The health official has fulfilled his obligations when these requirements have been met.

The management of syphilis among women of child-bearing age deserves special mention. It has been stated that the enactment of a law requiring serologic tests for syphilis in pregnancy obviates the necessity for their follow-up, since the discovery of the disease in pregnancy and subsequent treatment during this period will prevent congenital syphilis. If it were possible to see that all women seek prenatal advice early, this proposal would be sound. At present, however, such a plan is not practicable. Reports of serologic examinations on birth certificates received during January and February, 1939, indicate that only 25 per cent of prenatal examinations were made prior to the fifth month. Under these circumstances, it is possible to give adequate treatment during pregnancy to only one-fourth of the infected women. As I see it, the prenatal examination law is of greatest importance because it will lead to the discovery of syphilis in women who will be treated after the termination of their pregnancies to prevent congenital syphilis in possible subsequent offspring.

Whereas the health officer is primarily concerned with the masses, the individual patient is of greater interest to the practicing physician, and his responsibilities with respect to his patient extend far beyond those of the health official. Adequate antisymphilitic treatment, insofar as the attending physician is concerned, should be nothing short of the amount to cure the patient, if possible, or to permanently arrest the disease, and he cannot apply percentage probabilities to the patient at hand. Twenty injections each of arsphenamine and bismuth are not enough. For the early case, treatment must be given for at least a year, and usually longer, preferably for a full year after the serologic test has become negative. Under no circumstances should treatment be discontinued until an examination of the spinal

fluid has been made. Treatment of complicated cases may have to be given over a period of years, and all patients should be kept under observation for life. Nor can the practitioner limit his attention to any given class of patients. Each patient in whom a diagnosis of syphilis is made, whether congenital or acquired, early or late, presents a problem for the attending physician to solve. The case must be considered on its own merits.

Syphilis control, based on the diagnosis and treatment of the disease, obviously requires the close cooperation of the practicing physician and the public health official. It is necessary that each understand the responsibilities of the other and that they work together so that all cases receive sufficient treatment to control infectiousness and to prevent late manifestations of the disease with resultant social and economic loss.

## Discussion

Dr Ralph Muckenfuss, *New York City*—I should like to call attention to the statement of Dr Brumfield that—"The diagnosis of syphilis is essentially a laboratory problem." This is subject to several interpretations and is likely to lead to controversy unless elaborated and the meaning of his next sentence made more clear. This sentence is "The manifestations of syphilis may simulate almost any condition so that diagnoses based on clinical observations alone may be erroneous." This sentence, to my mind, is of paramount importance in showing the function of the laboratory—not the diagnosis, but as an aid in diagnosis, an aid that is intended to supplement and assist in the explanation of clinical observations.

Unless this function is made clear, there is danger that the laboratory may tend to supplant the physician in the diagnosis of syphilis, and this could certainly never be intended by any competent laboratory director.

The value of the laboratory in assisting the physician will be determined by two factors: the accuracy or specificity, and the sensitivity of the test employed. To attain the maximum of sensitivity without introducing false reactions is difficult and requires constant alertness, attention to all technical details, and continuous research into methods of improving the test.

The number of different serologic tests and the infinite variations in recognized tests show

that laboratory workers are aware of the shortcomings of available methods and are constantly striving to improve them.

In this respect, New York State is peculiarly fortunate. The State Division of Laboratories and Research has, over a period of many years constantly improved the reliability of serologic examinations for syphilis. The latest development, quantitative complement-fixation, has the scientific advantage of giving extremely accurate and delicate measurements of the reacting power of serum. Although requiring the readjustment to a new method of reporting, this should be no more difficult for the physician than changing the recording of temperatures from a Fahrenheit to a Centigrade scale. Accurate quantitation offers the possibility of advantages making this mental readjustment worthwhile. The ultimate value to the clinician can only be determined with the passage of years.

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# SUBACUTE BACTERIAL ENDOCARDITIS CASE

## New Method of Treatment

KURT LIPPMANN, M D , New York City

**I**N THE treatment of subacute bacterial endocarditis sulfanilamide and its derivatives have not been found as effective as could be expected after the striking results obtained in hemolytic streptococcic infections. Capps<sup>1</sup> doubts the value of chemotherapy in the treatment of the ordinary septic case with high fever and numerous embolic phenomena.

Most of the recovered cases reported in the literature fail to present sufficient evidence to be regarded as the usual type of subacute bacterial endocarditis in the active stage. Spontaneous recovery has been observed by Libman<sup>2</sup> in 3 per cent of his cases. Capps<sup>1</sup> reported 11 cases of complete recovery, but as he has seen no instance of recovery since 1924 he believes that all these recovered cases represent the percentage of milder cases always found during an epidemic wave. In his opinion such an epidemic wave occurred in the years before 1924, reaching its peak in that year. Kissling<sup>3</sup> reported only 1 case of recovery out of 43 studied.

In a symposium on therapeutic measures in endocarditis lenta arranged in 1935 by the editors of *Medizinische Klinik*<sup>4</sup> a number of outstanding German physicians stated that of all cases observed (about 200) none recovered and the mortality in this disease was estimated as 100 per cent.

Claims of a successful treatment of subacute bacterial endocarditis are remarkably rare and not very impressive.

Kollargol, gentian violet, and arsenphenamine have been used but are of doubtful value. Blood transfusions with the blood of the donors immunized with the patient's organism hardly proved successful<sup>5</sup>, vaccine therapy was disappointing. Capps<sup>1</sup> achieved favorable results by employing sodium cacodylate intravenously.

The era of sulfanilamide therapy raised

new hopes for obtaining an effective remedy against subacute bacterial endocarditis. Manson Bahr<sup>6</sup> reported 2 cases that recovered completely after intravenous injections of prontosil. Impressive as this report appears, especially the remarkable suddenness of recovery closely following the prontosil injections, none of his cases could be considered as the usual type of the disease. In November, 1938, Major and Leger<sup>7</sup> in administering prontosil intravenously described sudden improvement of a case which evidently had all the symptoms of the usual type. Unfortunately, the patient died very soon afterward of cardiac failure. Kelson and White<sup>8</sup> recently reported striking results in using a combination of sulfapyridine and heparin. Considering the fact that as a rule the streptococci lie near the periphery of the vegetation, the authors in their new method of treatment directed their efforts toward the vegetations and the embolic phenomena of the disease. The anticoagulant was used by them in an attempt to prevent further thrombotic deposition on the surface and to prevent embolism from freeing of fresh thrombus, with the help of heparin they believe they are able to check also the growth of the vegetations themselves.

Before discussing the method used in the writer's case some facts about the etiology and pathogenesis of the disease may be recalled and the fate of the organism in the blood considered.

*Streptococcus viridans* and *anhemolyticus* represent the causative bacteria in about 95 per cent, in most cases *Str. viridans* is the guilty organism. The so-called focal infections play an important role in the origin of the disease. Schottmüller<sup>9,10</sup> stated that the enormous bactericidal forces of the human blood are responsible for the low degree of

virulence of *Str. viridans*. Laboratory tests have shown that the blood is able to kill an enormous quantity of bacteria within a few hours. Embolism plays a secondary role as the cause of death. "The cause of death is generally exhaustion, myocardial failure when present is due to the general weakness of the toxemia and anemia" (Libman and Friedberg<sup>11</sup>).

Considering that in the fight against the disease the phagocytes are of greatest importance in controlling the infection, all efforts should be directed toward the reticulo-endothelial system in stimulating the production of phagocytes. Both the bacteriostatic power of sulfanilamide or its derivatives and the additional action of such an agent to increase the number of phagocytes may prove a powerful medication in the treatment of subacute bacterial endocarditis. This agent should also support or carry forward the limited effect of sulfanilamide on the production of antibodies, counteract the toxic effect on the general condition of the patient, and check any possible leukopenia, on the other hand the drug should control the symptoms of secondary anemia which always follows the usual type of the disease.

Sulfanilamide inhibits the growth of the organism but only in the presence of white blood corpuscles, including polymorphs<sup>12</sup>. Although the drug itself has no stimulating effect on the phagocytes, it alters the bacteria in some way, rendering them more easily phagocytized<sup>13</sup>. Osgood<sup>14</sup> demonstrated that sulfanilamide itself does not kill the bacteria but that it in some way facilitates the action of small amounts of specific antibodies on the organism, effecting the production of toxins. In meningococcal septicemia<sup>15</sup> and in pneumonia the use of both the drug and specific serums gave better results than sulfanilamide alone.

Without the knowledge of a previous report on the use of arsenicals in the treatment of the disease<sup>16</sup> this writer in his case applied a new method in using both the actions of sulfanilamide and derivatives and an arsenical compound—

1 per cent solution of ammonium heptachlorarsenate.\*

Arsenical compounds (excluding the arsphenamine group) have always been useful in the treatment of the anemias, in chlorosis, malnutrition, localized tuberculosis, and also in the treatment of leukemia and related diseases. Recent investigations<sup>1,17</sup> revealed that the arsenicals represent a powerful stimulant on the reticulo-endothelial system. Unfortunately, most of the products (sodium cacodylate) are unreliable because of the firm combination in which the arsenic is held and the small and variable amounts of the active constituents that are liberated.

In his case of subacute bacterial endocarditis as evidenced by high fever, positive blood culture, embolic closure of several arteries, petechia, spleen enlargement, Osler node, and the physical signs of a valvular lesion, this writer achieved remarkable success following closely the sulfanilamide and arsenical treatment.

### Case Report

I M., a white man aged 53, had a rheumatic history—rheumatic heart (insufficiency)—and a tonsillectomy in November, 1938.

On April 20, 1939, he started with headaches and fatigue, fullness after meals, loss of appetite, and constipation, but moderate temperature.

On April 29 he experienced shaking chills lasting fifteen minutes and his temperature was 103 F.

On May 3 the patient was first examined by the writer, at that time he complained of headaches and fainting spells abdominal pressure, a drawing pain of the extremities, and a loss of appetite. His temperature varied between 103 and 104 F., pulse was 120 and blood pressure 100/90, tongue was dry and coated and acute pharyngitis was present. There was a slight systolic murmur at the apex of the heart. The lungs were clear and resonant. The spleen was not palpable and the abdomen was distended and sensitive to pressure. Blood sedimentation rate (Fig 1) was 18 mm in twenty minutes (Linzenmeier method), w b c 11,000.

During the following days the patient showed symptoms of pleuritis sicca of the left side.

Examination on May 19 found him in fair condition with normal temperature. Sedimen-

\* Known as Solarsol.

FIG 1

Date	H B	R B C	W B C	Sed Rate	Seg ment	Lymph	Non segment Neutro	Bo	Mono	Blood Cultures
May 3			11,000	18 mm in 20 min *						
May 8			9 000		78%	28%	1%	3%		
May 19			8 000	18 mm in 40 min						
May 29			12 000	18 mm in 18 min						
May 30	60%	3 900 000	16 000		78%	28%		4%		
May 31	13 Gm **	4 320 000	8 200		75%	20%		5%		Streptococcus vir- dans. (Colonies too numerous to count)
June 2				65 mm *** in 45 min						
June 3	12 Gm	4 160,000	7 500		59%	32%	3%	2%	1%	
June 7	11 6 Gm	4 160 000	13 000		70%	23%	5%		2%	
June 24	55%	3 300 000	5 000		70%	27%	1%	2%		
July 7	65%	3 800 000	6 000		69%	29%	1%	1%		
Aug 4	75%	4 300 000	7,300		47%	49%	1%	3%		
Sept 9	75%	4 050,000	7 200	18 mm in 100 min	59%	37%	3%			
Sept 27										Culture sterile after eight days incu- bation

\* Normal = 18 mm in 100 min or longer

\*\* 15.5 Gm. = 100%

\*\*\* Normal = 8 mm in 45 min

tation rate (Fig 1) was 18 mm in forty minutes, w b c 8,000. Fluoroscopic examination showed the heart not enlarged and the lungs clear.

Against advice the patient left for the country for a rest.

On May 28 the writer was called again. Patient complained of general weakness and severe pain in the left calf, which made walking impossible. This pain had developed during his stay in the country and was first noticed on May 22. He had experienced shaking chills on May 24. Examination revealed temperature 105 F, pulse 120, of poor quality. There was loud and rough systolic murmur at the apex and over the mitral valve. Spleen was not palpable, no petechia and no Osler nodes. The left leg was very sensitive in the region of the arteria tibialis posterior, three fingers below the knee joint (embolus). W b c was 16,000 and the sedimentation rate (Fig 1) was 18 mm in eighteen minutes.

On May 30 he had another attack of chills.

Patient was hospitalized (Hospital for Joint Diseases) on May 31. The temperature dropped to 102 F the first day and remained low the following days. On June 2 shaking chills occurred again. On June 4 embolic closure of the right arteria peronea was noted (Fig 2). Blood culture: *Streptococcus veridans*—colonies too numerous to count, w b c ranged between 8,200 and 13,800, r b c 4 160,000, lymphocytes 23 per cent, nonsegment-neutrophils 5 per cent, sedimentation rate (Fig 1) 18 mm in sixty-five minutes.

In the course of the disease, being treated at his home with sulfanilamide, neo-prontosil and sulfapyridine, the patient showed the following

additional symptoms: clubbing, petechiae, enlargement of the spleen, embolic closure of the right arteria radialis. Red blood corpuscles had occasionally been found in the urine. The number of r b c dropped to 3,200,000 and the number of w b c dropped to 5,000, hemoglobin was 68 per cent (June 28). One Osler node was observed on the pad of the left middle finger (June 11). On June 20 patient became extremely ill, a grayish yellow complexion with sunken pinched features and a dry brownish tongue made him appear to be failing rapidly.

On June 28 the picture suddenly changed. After ammonium heptenchlorarsenate had been employed a remarkable improvement took place and continued with subsequent injections. The temperature fell below 100 F within a few days, the tongue cleaned, the cardiac murmur softened and the entire expression of the patient's face brightened. He felt like a "new man." No further embolic phenomena were noticed. The number of the r b c increased to 4,300,000 and the hemoglobin to 75 per cent, the number of w b c increased from 5,000 to 8,000 and finally reached 7,300. A lymphocytosis of 49 per cent was present. The enlargement of the spleen disappeared. The appetite became excellent and the patient expressed the desire to go back to business.

One month after the commencement of the treatment, patient was allowed to sit up in bed, two months later he was able to walk about like a normal individual, and ten weeks later (since the middle of August) he was out in the streets enjoying the fresh air. Since the end of August the patient has attended to his business, spending more than five hours at his office without

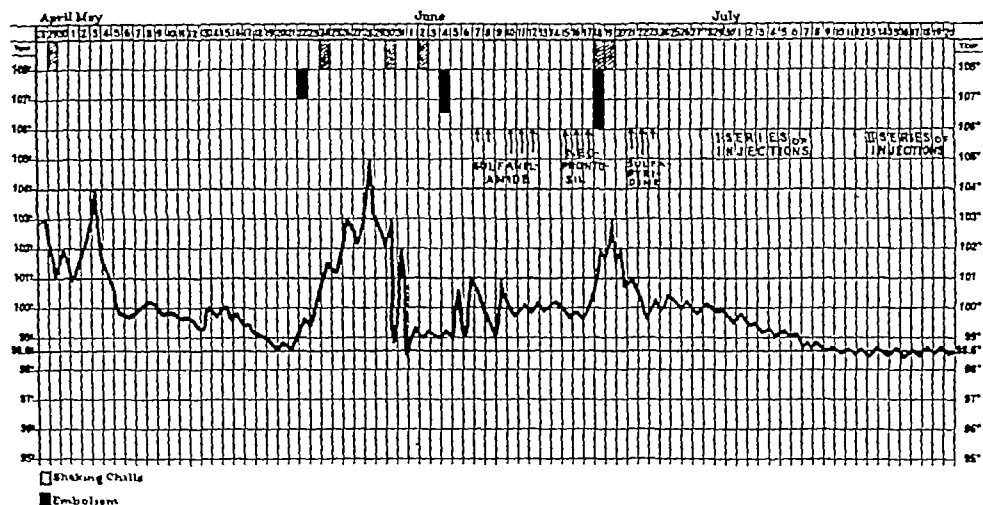


FIG 2

feeling any ill effects. Blood culture findings on September 27 were culture sterile after eight days' incubation at 37.5°C, temperature 98.6°F rectal. On October 9 the sedimentation rate (Fig 1) was 18 mm in one hundred minutes.

The treatment consisting of sulfanilamide and derivatives and injections of 1 per cent solution of ammonium heptenchlorarsenate was carried out as follows:

On June 7 and 8 a small dose of sulfanilamide (30 grains in twenty-four hours) was given at three-hour intervals. On June 10, 11, and 12, the patient received 60, 75, 90 grains, respectively. For the following days the drug was discontinued and neo-prontosil was given by mouth. On June 15, 16, and 17, the patient took 90, 80, 90 grains of the drug, respectively. Because of a new severe attack requiring the use of hypnotics neo-prontosil was discontinued. From June 21 until June 23 40 grains of sulfapyridine were given. Because of nausea and of leukopenia (5,000 wbc—Fig 1) the drug had to be discontinued and from June 24 until June 27 no medication was given.

On June 28 the first series of daily injections of 1 cc. of 1 per cent solution of ammonium heptenchlorarsenate was started in continuance of which the improvement of the general condition became more and more apparent. On July 7 the patient received the last intramuscular injection of the first series. After an interval of four days a second series began, 2 cc of 1 per cent solution of ammonium heptenchlorarsenate were given approximately every other day. On August 4 the patient received the last injection. Altogether 585 grains equal to 32

grams of sulfanilamide and derivatives and 30 cc of the arsenical drug were administered.

Hematologic and laboratory findings are presented in Fig 1. The results of sedimentation rates and blood cultures, the drop of the number of wbc to 5,000 under sulfanilamide therapy, the appearance of a lymphocytosis of 49 per cent with an increase of the rate of the wbc, and the improvement of the anemic condition under the arsenical treatment are interesting facts.

The fever was mainly of intermittent character (Fig 2). Shaking chills occurred on April 20, May 30, June 2, and frequently on June 18 and June 19. Embolic phenomena were noticed on May 22 (left calf), June 4 (right arteria peronea), June 18 (embolic closure of the right arteria radialis), June 19 (petechiae of conjunctiva of the right eye).

## Summary and Conclusion

In this case of subacute bacterial endocarditis of usual severity with numerous embolic phenomena, a sudden remarkable recovery was observed closely following the administration of sulfanilamide and the arsenical compound. Under sulfanilamide treatment of short duration no improvement of the condition was noticed. Recovery began after the fourth or fifth injection of 1 per cent solution ammonium heptenchlorarsenate. The arsenical drug had an excellent effect on the general condition and appetite of the patient and increased hemoglobin, the

number of the r b c and of the w b c (phagocytes)

Besides its bacteriostatic and toxines neutralizing effect, the mode of action of sulfanilamide in this case may be interpreted as preparatory to the action of the arsenical drug in altering the bacteria, thus making them more easily phagocytized

The arsenical treatment should be continued for a longer period of time or repeated in short intervals. During recovery blood cultures should be taken weekly or at least twice a month. Positive blood cultures or the recurrence of clinical symptoms indicate immediate administration of sulfanilamide or its derivatives, followed by the arsenical drug.

Confident of his good physical condition the patient in this case refused further observation and treatment.

It is too soon to consider this case as completely recovered—yet the fact of the

sudden improvement of a severe case of subacute bacterial endocarditis may justify an early report

2138 Wallace Avenue

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## AMERICAN HEART ASSOCIATION

The Sixteenth Scientific Sessions of the American Heart Association will be held at the Hotel Roosevelt, New York City. The general cardiac program will be given on Friday, June 7, and the program of the Section for the Study of the Peripheral Circulation on Saturday June 8.

## DON'T VERGE

In these days of change and uncertainty, remarks the *Ohio State Medical Journal*, the county medical society which does not have an alert committee, possessed of intestinal fortitude, representing the society on questions of public relations, might just as well admit that it's verging on a state of coma.

## AMERICAN STUDENT HEALTH ASSOCIATION MEETING—NEW YORK STATE SECTION

This annual meeting will be held at New York State College for Teachers, Albany, May 11, 1940, at 10 00 A M.

All college physicians, nurses, physical education teachers, guidance and health personnel are cordially invited to be present and to participate in the group discussions following each topic.

The program centers around the following phases of Health and Physical Education for college students:

1. Five-year study of tuberculosis control in State Teacher Educating Institutions

2. Social Hygiene
3. Recent policies of the American Student Health Association
4. Guidance
5. Coordination of Health Service and Physical Education
6. Function of College Hygiene in Student Living

LILLIAN DEARMIT, M D, *President*  
ADRIEN G GOULD, M D, *Vice-President*  
JANE N BALDWIN, M D, *Secretary-Treasurer*

## TUBERCULOSIS—EARLY DIAGNOSIS CAMPAIGN

"The X-ray Reveals Tuberculosis Before Symptoms Appear" is the slogan for this year's Early Diagnosis Campaign—an educational

campaign carried on annually by the more than 2,000 tuberculosis associations throughout the country during April.

# TREATMENT OF CORPOREAL CARCINOMA WITH RADIUM

HYMAN STRAUSS, M D , Brooklyn, New York

CARCINOMA of the fundus uteri, in our experience, seems to be increasing in frequency. Can this be due to the increasing interest in cancer in general as well as in radiation therapy?

In the past, surgeons seem to have relied upon surgery exclusively. The gynecologists have usually combined radiation with surgery either pre- or post-operatively. In patients with far-advanced lesions, radiation therapy was the sole remaining modality in our armamentarium. Because of our increasing knowledge of the efficacy of radiation therapy, its use is gradually being extended to those cases that are classed as poor surgical risks (e.g., patients with cardiac disease, nephritis, diabetes, hemiplegia, senile arteriosclerosis, marked obesity, etc.). Is it a mere coincidence that we have never observed a fundal carcinoma in a thin individual? Moreover, at the present time, there is an increase in the use of radium therapy even in good surgical risks. Since the incidence of inoperable carcinoma of the corpus has increased, it has become imperative for us to find a satisfactory form of radiation treatment for this large group of patients.

Healy, in an address before the American Gynecological Society in 1933, said, "Adenocarcinoma of the corpus is going out of the hysterectomy class into the radiation class." Judging from the literature, this opinion is shared by men of considerable experience, Burnam, Neill, Cutler, Schmitz, Heyman, Arneson, Greenhill, and others. However, before radiation can replace surgery, leading clinics must show by statistics a significantly higher percentage of five- and ten-year salvages than has been obtained by surgery. For these reports to be of

any value, cases must be tabulated both as to their clinical extent and pathologic groupings. It is unfair to place all carcinomas in a single group and to expect the radiation results in Group 4 to compare favorably with the surgical results in Group 1.

We feel that, in those cases of uterine carcinoma designated by the pathologist as Grades 1 and 2, radiation is as effective as surgery without its immediate mortality. When the pathologic process is limited to the endometrium the modality employed matters very little, but when the process has advanced beyond the muscular barrier much better results follow conservative treatment. In Grades 3 and 4, radiation alone seems to be superior to surgery. In uteri with distended and distorted cavities caused by either intramural or submucous fibroids, polypi, or bulky everted neoplasms, surgery, wherever feasible, is advisable but should be preceded by radiation. This conclusion is based on past experience when a single intrauterine tandem was applied. Our more recent cases with multiple radium applicators within the corpus are giving better immediate results and promise still better results for the future.

Radium applied at the time of curettage holds in check all cancer cells within the irradiated area including any viable cells that may have been liberated. High voltage x-ray therapy has a similar but less potent effect. Of course, we are anxious to use that modality which in the long run will prove to be best for the patient. We respectfully leave to those who have greater clinical facilities the statistical survey proving the superiority of one modality to that of another.

Adequate dosage and proper distribu-

tion of radium constitute essential prerequisites for the radiation treatment of fundal malignancies. It is probable that heretofore the lack of proper applicators may have retarded the more frequent use of radium in uterine neoplasms. We realize that no prearranged mechanical applicator will suit all patients, nor do we advocate that the patient be made to fit the applicator. For these reasons we are presenting several types of intrauterine radium containers.

To the roentgen therapist, we leave the details and factors of external radiation because it is beyond the scope of this paper.

In the treatment of fundal carcinoma our aim is to destroy the tumor completely, sterilize its bed, and seal the adjacent lymphatics. This necessitates the use of sufficient radiation properly distributed throughout the uterus. One should know the size and shape of the cavity and be aware of the presence of fibroids or polyp*i* before attempting to treat a particular patient. Knowledge of the exact location of the lesion is a *sine qua non* for successful therapy. One should know, as far as it is possible to determine, the extent of the growth, the degree of uterine mobility, and the presence or absence of parametrial invasion. Such information may be ascertained by an abdominal and rectal examination, probing the uterus with a graduated sound, measuring the intercornual distance by the Schmitz Uterometer and by curettage. At present, hysteroscopic examination is not satisfactory. Hystero-graphy by methods used up until now is contraindicated. Sampson in 1934 most ably pointed out the limitations of intracavitary radium application.\*

Since no claim to priority is made in applying multiple-area intrauterine radium, an exhaustive search for the pioneers who developed this technic was not attempted. We gladly pay intellectual tribute to our contemporaries and predecessors whose work has influenced ours.

Heyman, at the Radium-hemmet, in-

troduces a large number of separate capsules within the uterus. This method, when finally developed, may be satisfactory if the time factor is sufficiently short, thus decreasing the possibility of motion.

Stacy, Bowing, and Fricke, at the Mayo Clinic, have been using an intrauterine tandem applied at various levels, instead of several capsules simultaneously.

The late John O. Polak, of Brooklyn, used radium capsules within a "T shaped" gallbladder drainage tube to irradiate fundal lesions.

In 1930 William L. Brown, of Chicago, described a multiple-area intrauterine radium applicator in the shape of a rosette with three capsules, each of which is attached to the end of a flexible sound. They are held together by a sheath that fastens over their distal portions. The protruding springs are graduated so that their levels can be varied and noted. This applicator is flexible and adjustable so that the dose may be varied for different areas, thus reducing local tissue injury and destruction at any single point. When the cavity is asymmetrical, Brown's applicator is more suitable because it radiates a broader field. Its limitation lies in the fact that the source of radiation from the central capsule comes from the tip rather than the side of the applicator.

In 1931 Diehl described the Heidelberg radium applicator for the fundus. This is a rosette similar in construction to Brown's applicator but less adaptable.

In 1933 Elizabeth Hurdon of the Marie Curie Hospital, of London, described a method of placing a small radium capsule in each cornua by means of flexible wires along the side of a central tandem. This applicator has no obvious advantage over those that preceded it.

At the 1935 session of the American Radium Society, Henry Schmitz presented his "Y shaped" intrauterine radium applicator. It was this careful and thorough radiologic presentation that inspired us to undertake the present study. For details concerning the measurements of the cavity and walls of the uterus, equal intensity curves, and other

\* Through the courtesy of Dr. Sampson lantern slides of hystero-graphs illustrating these difficulties were presented at the reading of this paper at the Annual Meeting.

pertinent factors, one must consult his original article. The lateral uterine walls are adequately radiated, as is the fundus if the intercervical distance is no greater than is indicated by his equal intensity curves. However, if this distance is increased it becomes obvious that additional radium sources should be added. If the fundus contains a submucous fibroid, a polypus, or bulky carcinoma, the therapeutic procedure must be modified. For the true "Y shaped" or pseudo-bicornuate uterine cavity, we feel that Schmitz's applicator is by far the most satisfactory.

A homogeneous distribution of radium is important if the periphery of the uterus is to receive adequate radiation. To say that the greater the proximity of the radiating source to the lesion, the greater the chance of cure, is axiomatic. Radiation curability implies that the entire lesion and involved lymphatic and vascular channels must be within reach of a cancericidal dose of radium and that the most remote areas of the neoplasm receive a dose that is adequate to destroy the most radioresistant portion of the lesion. The maximum dose of the intra-uterine radium is limited by the sensitivity of the intestinal mucosa rather than the lesion itself—personal communication of Dr. James Albert Corscaden. Until our pathologic confreres can assure us that the area examined under the microscope is typical of the lesion as a whole, we must accept with caution their histologic grouping and treat the lesion as radioresistant. In our present state of uncertainty as to the fallibility of histologic interpretation, we dare not gamble with human life by relying upon the differential radiation response based upon microscopic study of a minute and perhaps heterogeneous area of the neoplasm. MacCarthy believes "that all cancers, regardless of microscopic grade or theoretic sensitivity, should be treated as radically as possible since we do not know enough about either to do otherwise." If tumor fragments are present in either the distant lymphatic or blood channels, the tubal

lumina, on the ovarian surface or in the medulla, or in adjacent tissues, all that can be reasonably expected is palliation, and radiation therapy is the modality of choice. The slogan, "eternal vigilance is the price of freedom" (we mean freedom from recurrence), is most appropriate in cancer of the corpus. Curettage upon the slightest spotting subsequent to radiation therapy will help rule out residual activity or recurrence. If postradiation hysterectomy is performed and serial sections are negative for malignancy, what more conclusive histologic evidence can one want of the efficacy of radiation therapy? Of course, the ultimate test is a five- or ten-year survival free from residue or recurrence or an autopsy revealing no malignancy.

Satisfactory results cannot be expected from mere chance applications of radium. The applicators must be made to comply with the patient's requirements, i.e., every case must be individualized. It is difficult to conceive that sufficient and satisfactory radium dosage could be obtained from the tip of a single tandem or a capsule placed in the uterine cavity (Fig. 1). To obtain maximum efficiency, the side rather than the end of the applicator should be in proximity to the lesion. For the true pyriform or triangular cavity, a transverse fundal radium capsule is advisable. With this problem in mind we have endeavored to make a mechanical applicator that would enable us to radiate the lesion with the axis of the applicator parallel to the lesion rather than perpendicular to it.

In order to apply radium more uniformly throughout the corpus, we employed several techniques with varying success. First, we used a single woven silk catheter with a string attached to the tip, arranged so as to enable external manipulations to form an intrauterine loop.

Second, we tried three woven silk Gaillard sounds fastened to each other at their tips. Both of these were discarded because control in manipulation was inadequate. Third, we fastened two catheters at right angles making a more



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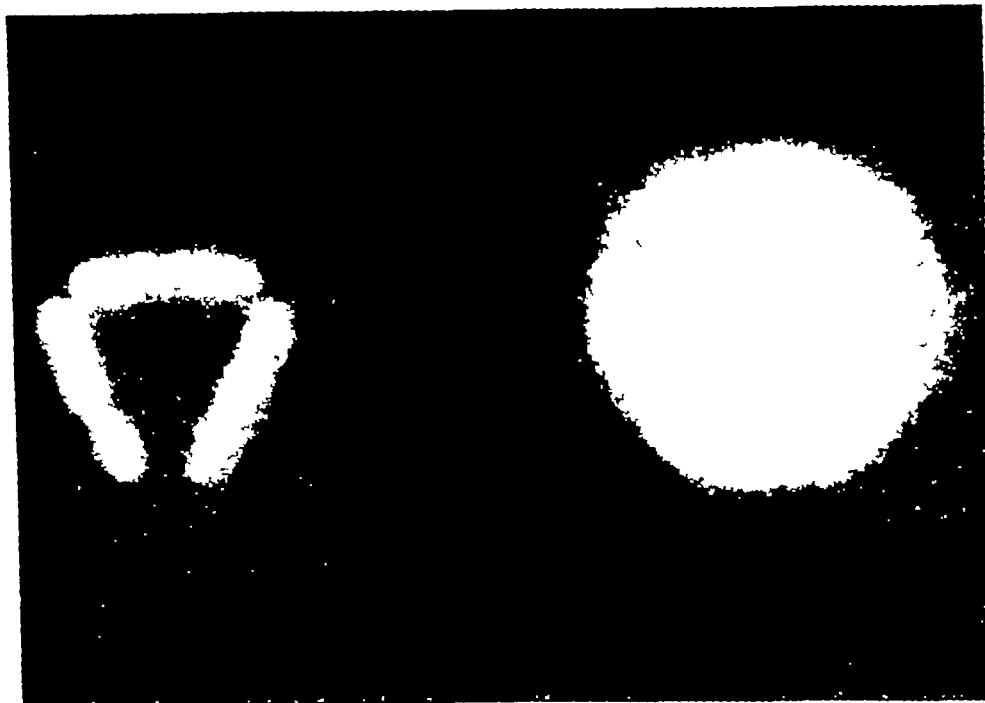


FIG 5 Radium radiographs

*situ*, we have been using handles similar to but more adaptable than those of Brown

### Conclusions

1 Corpus cancer requires the greatest individualization of therapy

2 There is still a field for surgery in the treatment of fundal carcinoma

3 In poor surgical risks, multiple-area irradiation by a variety of applicators gives better immediate results and promises even greater success in the future

4 Radium technic has its limitations, as noted above. Any of those applicators or combinations of them may be used if applied properly

5 Inaccessible lesions, heretofore treated surgically of necessity, may now, as a result of the improved technic and the more adaptable applicators, be irradiated with more satisfactory results

6 The triangular applicators have the added advantage of more uniform radia-

tion, ease of application, adaptability, and external control

We are indebted to Dr Leda J Stacy for her advice and encouragement, also to Miss Edith Qumby and Mr Irving Blatz, physicists

We presented our applicators not as a perfect instrument, but with the hope that it may stimulate others to greater achievements

755 Ocean Avenue

### Discussion

Dr Nelson B Sackett, *New York City*—In his interesting historical review of the methods of treatment of fundus carcinoma, the author has wisely warned us not to rely too much on immediate results. It is to be hoped that the value of the ingenious mechanical methods demonstrated by Dr Strauss will be checked by reports of five-year results from his clinic and others. While there can be no denial of the advantage of the radioactive source lying parallel to the fundus in cancer of that region we should beware of the greater danger of damage to the

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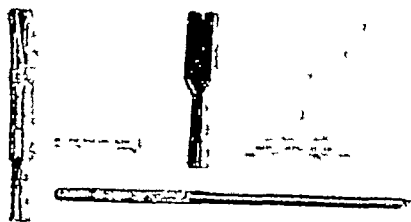


FIG 1 Triangular radium applicators—closed

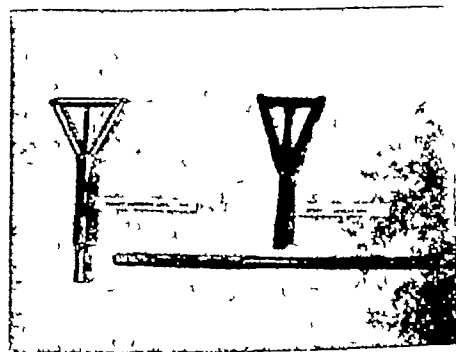


FIG 3 Triangular radium applicators—wide open

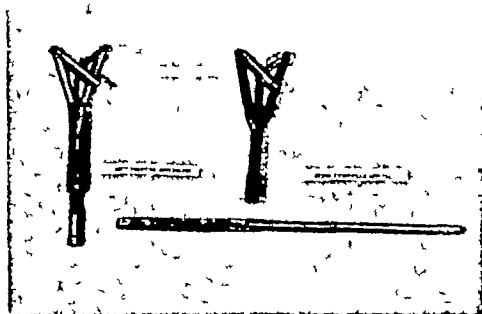


FIG 2 Triangular radium applicators—half open

flexible device, hoping for greater ease in manipulation. This was likewise discarded when we had difficulties in placing and maintaining them in the desired position within the uterus.

Since we encountered all of these difficulties, our problem was to develop an applicator which could be controlled with ease, applied to the area desired, sufficiently rigid to remain *in situ*, and flexible enough to apply to various types of uterine cavities. We finally devised mechanical applicators consisting of three capsules so arranged that they can be inserted into the uterus through an orifice of minimum diameter and then opened to the desired size when inside the cavity. One is operated on the principle of the screw (Figs 1, 2, 3), while the other applicator works on the principle of direct pressure. Equal intensity curves of these triangular applicators are shown in Figs 4 and 5.

In distorted and distended uterine cavities, in addition to the aforementioned applicators, we also use capsules hinged to graduated rods of varying flexibility which enable us to reach inaccessible areas. We also had made up an adaptor fixed to a graduated rod to hold the usual Gauss end, thus enabling us to attach a variety of applicators without incurring unnecessary duplication of capsules.

In those cases where we follow the method of Heyman of using many intra uterine capsules, it has been found to be of decided advantage to use wires to facilitate introduction (in addition to the threads). In order to maintain the wires and their respective capsules<sup>11</sup>

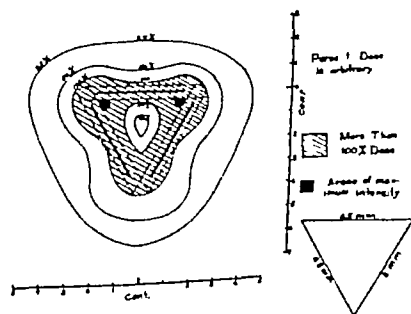


FIG 4 Isodose curves

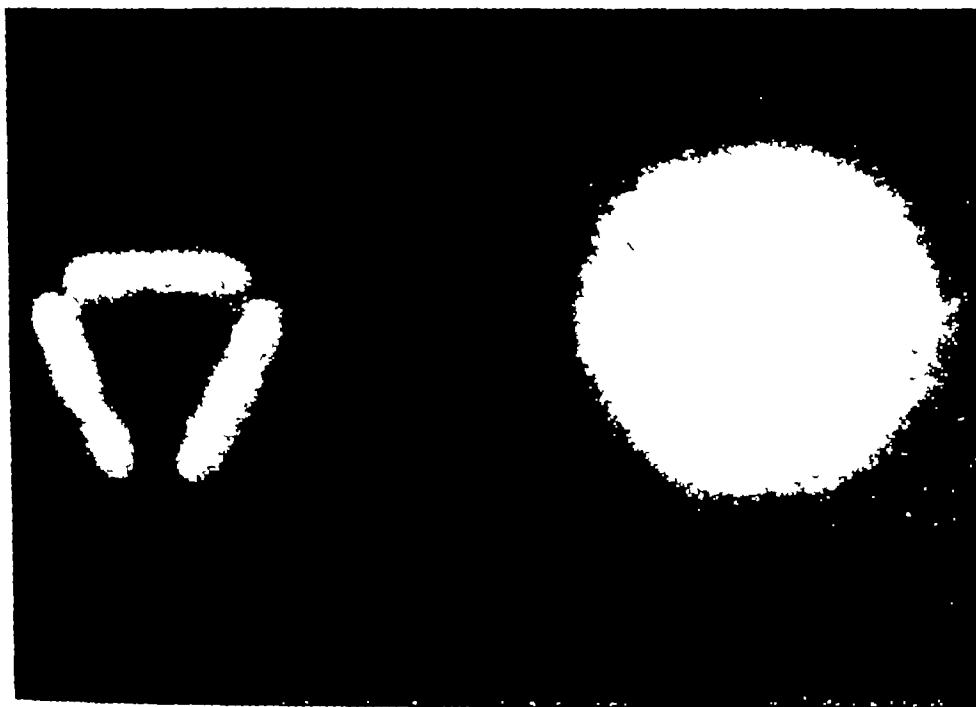


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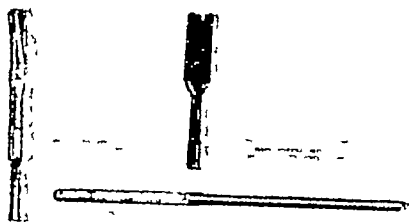


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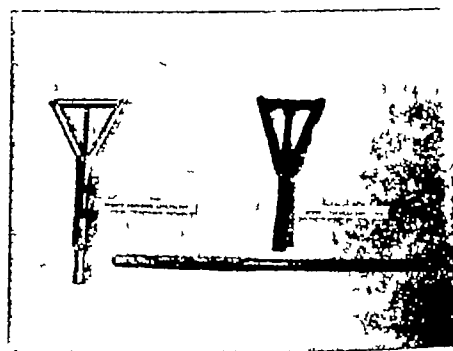


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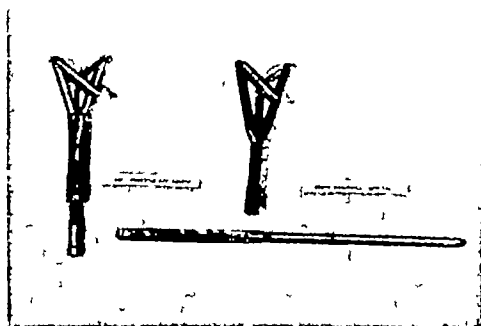


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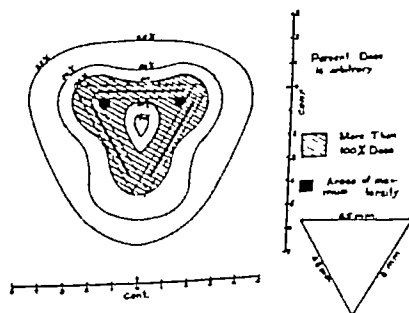


FIG 4 Isodose curves

# Special Article

## Tragedy and Comedy

(In one act "Wagnerian")

G P BERGMANN, M D, Mattituck, New York

### Scene I

Scene Bedroom in an average home in the country in the still hours after midnight. Mr and Mrs Citizen are conversing Mrs Citizen is in bed and is suffering with intermittent pains Mr Citizen is up and dressed and poking at the stove.

Mrs Citizen 'I wish they would hurry These pains are pretty bad'

Mr Citizen 'Now don't worry, Martha, Dr Black will soon be here and he is coming as fast as Mr Government and the others are bringing him.'

Mrs Citizen 'I wish Dr White were taking care of me again. I can't help feeling a bit scared I don't know much about Dr Black except that Mr Government says he's O.K.'

Mr Citizen 'Don't worry, all doctors are alike, and just think, we won't have to pay this doctor Mr Government's got that all fixed up'

Mrs Citizen 'Yes, I know, but just the same I wish Dr White were coming Remember, with John I had a bad hemorrhage? He seemed to know just what to do Remember?'

Mr Citizen 'Remember? Whew, I'll never forget. It makes me cold all over to think of it. Old Doc White certainly saved you that time and I almost dropped dead when he said his bill would be \$30 for the whole job Why I thought controlling that hemorrhage was worth a hundred to say nothing of all the care before and after John came. And then that turning around inside business he did when Mary was born She got crosswise, I believe he said. Yes, I kindo' wish old Doc White were Listen! is that a car I hear?'

Mrs Citizen (Having a bad pain) 'I-don't hear-any-anything' (She relaxes and continues) 'Yes, poor Dr White God rest his soul. He didn't live long after Mr Government took over control of doctors and their work. It musto broken his heart. I know one day he said he couldn't practice medicine anymore the way it should be practiced He said that Mr Government meant well but that after all was said and done nobody knew how to take care of sick folks except a doctor He said, too, that what he and other folks thought was going to be help had turned out to be interference and that he didn't know whether he felt sornier for sick folks, for Mr Government, or for himself Nothing just seemed to work out right.'

Mr Citizen 'Funny it ought to work out all right After all a doctor is a doctor and he

should have it much easier now They say that Mr Government just goes every place with him and helps and sees that he does his job right. And often they are accompanied by Professor Bureaucrat and Mr Indictment and if necessary they call on those famous Court Brothers And they, you know, have been in business a long time although I just read in the paper that several of them had died because of overwork But Mr Government has put in some of his own cousins so it ought to be all right. Still it doesn't seem like all that's necessary Why, old Doc White used to Listen! a car is coming!'

(He goes to the window)

'That's funny, Martha, it looks more like a bus than a car and there're several people in it—looks like a dozen or so And they're coming in'

(He starts for the door but Mrs Citizen with tight lips grasps his hand and he stays)

The door is unceremoniously opened and a very large and powerful looking personage announces 'Howdy folks, I am Mr Government and I have come to help you I take it you are case No 563,129? Dr Black is under restraint in the vehicle outside. He differed with me on the handling of your case on the way over so Mr Indictment and several of the Court Brothers have taken him in hand and by now he is properly chastised. Now let me see (starts to enter when a small figure struggling and panting emerges from the darkness and shouts) 'No you don't, Mr Government. Not beyond the threshold of the sickroom. I didn't mind you escorting me over and listening to your silly nonsense on how to deliver this baby but this is my work now Stay back! Moreover, don't you remember when I took this job you promised that?'

Mr Government (interrupting) 'Tut, Tut Mr Black. That was way over a year ago Why since that time as my bookkeeper Mr Statistics tells me, there have been over 500,000 cases so you see I've had plenty of experience.'

Dr Black 'Not over the threshold you can't go in there not over the threshold!'

(They struggle. Professor Bureaucrat, Mr Indictment, Mr Statistics, and the Court Brothers appear They lend Mr Government assistance and soon Dr Black is choked into insensible submission.)

At this point there is a cry from the bed and Mrs. Citizen is in evident distress Mr Citizen points to her and is the picture of fear and helplessness

adjacent intestine In recent months, 3 cases have been operated upon at the Woman's Hospital for intestinal obstruction following radiation with radium and x-rays for uterine cancer and nonmalignant productive inflammation and stricture found in the rectosigmoid region opposite the uterine corpus Although knee-chest or prone positions and frequent change of position during radium treatment decrease exposure of the bowel, this advantage applies less to the more fixed pelvic colon It is true that our tandem treatment gives the cancericidal dose of 7-15 T E D only in a narrow elliptical zone around intercervical axis

In spite of the more thorough irradiation envisaged by Dr Strauss we do not feel that it can ever wholly replace surgery in adenocarcinoma of the corpus uteri The slide shows that of 123 cases observed at the Woman's Hospital, 9 of which were too hopeless for treatment, 54 women survived for five years, giving an absolute rate of 43.9 per cent and relative rate of 47.4 per cent regardless of histologic type and method of therapy Of the 64 cases treated by radiation alone only 23 or 35.9 per cent lived five years, and 8 of the 23 developed or died from the cancer after living five years When the cases are grouped according to therapy employed we find the relative five-year cure rates as follows 35.9 per cent for the 64 cases treated by radiation alone, 50.0 per cent of the 28 by surgery alone,

and 17 out of 22 or 77 per cent by combined radiation plus surgery

In adenoma malignum Groups 1 and 2, radiation alone gave us 35.7 per cent relative cures compared with 75 per cent by surgery alone and 71.4 per cent by combined therapy

In adenocarcinoma Group 3, radiation alone gave 33.3 per cent, surgery alone 27.3 per cent, and combined therapy 85.7 per cent of five-year survivals

Of 4 adenocarcinomas Group 4, the 2 radium cases and 1 surgical case rapidly succumbed while 1 case treated by radiation plus hysterectomy is living at ten years Our preference at present is therefore to perform diagnostic curettage and insertion of radium at the first admission, giving 2,400 to 3,600 mg hr, and to perform panhysterectomy in all technically and medically operable cases about six weeks later Roentgen therapy is added wherever possible.

The above remarks in no way weaken the value of the speaker's search for and contribution to the more uniform and thorough irradiation of uterine cancers With operation contraindicated by old age and medical infirmities in nearly one-third of the cases and by widespread or inoperable growths in many others, radium and x-ray offer the only hope for these women Likewise our own experience indicates that even the superiority of surgery in operable cases is heightened by adjuvant radium and x-radiations.

## HOLLYWOOD GOING MEDICAL

A press dispatch from Hollywood says "Give an actor the role of a doctor and his dramatic future is secure Stage fame may come from playing Hamlet or Pagliacci, but success in pictures frequently is the result of playing the part of a doctor"

Edward G. Robinson, for example, takes a sharp turn in his career when he plays Dr. Paul Ehrlich, the man who discovered salvarsan, in Warner Brothers' "The Life of Dr. Ehrlich"

Although not actually a doctor role, "The Story of Louis Pasteur" for Paul Muni meant that he was reaching one of the pinnacles of filmdom Muni did medical research in that picture, in which he played the famous French scientist

Lionel Barrymore has made himself even more famous with his portrayal of Dr. Gillespie in the "Kildare" series And Edward Ellis was hailed by critics and public alike after he appeared as a country doctor in "A Man to Remember"

And consider the stature of Robert Donat as the young doctor in "The Citadel," or the eminence to which Jean Hersholt rose as Dr.

Luke in the Dionne quintuplet series, an eminence he still holds in his current Dr. Christian films

Ronald Colman solidified his position in pictures through his portrayal of the Dr. Arrowsmith in Sinclair Lewis' story, "Arrowsmith" One of Warner Baxter's greatest performances was in the role of the celebrated Dr. Mudd in "Prisoner of Shark Island"

Medicine has been kind to newcomers as well as oldtimers Robert Taylor was first observed when he played a bit part in "Society Doctor," and he won stardom for his role of a doctor in "Magnificent Obsession"

In addition to Barrymore, Lew Ayres has re-established himself on the screen because of his work as Dr. Kildare in the series of that name Gary Cooper was a doctor in "The Real Glory," Clark Gable gave a hit performance as a medico in "Men in White," and Thomas Mitchell won critical acclaim for his drunken doctor in "Stage-coach"

Perhaps this way to stardom should be called the medical road to fame

## CURRENT LECTURE COURSES

A course of lectures on hemorrhage has been arranged by Dr A F R Andresen, of Brooklyn, (from the Department of Medicine, Long Island College of Medicine) for the Sullivan County Medical Society. These are held on Wednesdays at 8 00 P.M.

March 20 (Lenape Hotel, Liberty), "Gastrointestinal Hemorrhage," Dr A F R Andresen, F.A.C.P., Professor of Clinical Medicine, 88 Sixth Avenue, Brooklyn, March 27 (Monticello Hospital, Monticello), 'Uterine Hemorrhage,' Dr Vincent P Mazzola, Instructor of Obstetrics and Gynecology, 133 Clinton Street, Brooklyn, April 3 (Workmen's Circle San., Liberty), "Pulmonary Hemorrhage," Dr Richard H Bennett, Clinical Professor of Medicine, 52 Remsen Street, Brooklyn, April 10 (Woodbourne Institute, Woodbourne), "Hemorrhages of Pregnancy," Dr Mervyn V Armstrong, F.A.C.S., Asst Clinical Prof Obstetrics & Gynecology, 85 Pierrepont Street, Brooklyn April 17 (home of Dr Golembe, Liberty), "Hematuria," Dr Fedor L Senger, F.A.C.S., Professor of Clinical Urology 142 Joralemon Street, Brooklyn

Dr Andresen has also arranged lectures on hemorrhage for the Tioga County Medical Society. These are held alternately at the Green Lantern Inn, Owego and the Jenkins Inn, Waverly, at 6 30 P.M.

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rhages of Pregnancy,' Dr Mervyn V Armstrong, F.A.C.S., Asst Clinical Prof of Obstetrics and Gynecology, 85 Pierrepont St., Brooklyn, April 10, "Hematuria," Dr Fedor L Senger, F.A.C.S., Professor of Clinical Urology, 142 Joralemon St., Brooklyn, April 17, 'Uterine Hemorrhage,' Dr Vincent P Mazzola, Instructor of Obstetrics and Gynecology, 133 Clinton Street, Brooklyn

The Fulton County Medical Society, Gloversville New York, announces a course of lectures on heart disease to be given Fridays at 9 00 P.M. These were arranged by the late Dr John Wyckoff and revised by Dr C E de la Chapelle

March 29, "Cardiac Structure and Its Disorders," by Dr Irving Graef, Associate Professor of Pathology, 140 East 81st Street, New York City, April 5, "Cardiac Functions and Their Disorders," Dr Charles E Kossmann, Instructor in Medicine, 140 East 54th Street, New York City, April 12, "Rheumatic Fever and Rheumatic Heart Disease," Dr Currier McEwen, Dean and Associate Professor of Medicine, 477 First Avenue, New York City, April 19,"

Hypertension and Hypertensive Heart Disease," Dr William Goldring, Associate Professor of Medicine, 1088 Park Avenue, New York City, April 26, "Syphilitic and Arteriosclerotic Heart Disease," Dr C E de la Chapelle, Professor of Clinical Medicine, 140 East 54th Street, New York City

All lecturers are members of the staff of Bellevue Hospital and of the faculty of New York University College of Medicine

## HEALTH AT THE NEW YORK FAIR IN 1940

The announcement that the Medicine and Public Health Building at the New York World's Fair will re-open for the 1940 season on May 11 under the direction of the American Museum of Health is gratifying, observes the *J.A.M.A.* Undertaken last year as an idealistic experiment, the medical and public health exhibits at the New York World's Fair enter the new season with a background of proved success

More than 7,500,000 visitors were clocked in a daily check on attendance. This breaks the record in the field previously held by the International Hygiene Exposition in Dresden in 1911 with 5,500,000. Every third World's Fair visitor came to see these exhibits demonstrating the intense interest of people in their health even in competition with extravagant presentations of industrial enterprises

In assuming direction of the medical and public health exhibits the American Museum of Health will maintain the same policy that guided the planning of the exhibits last season. With the backing and cooperation of the medical profession each exhibit will present with scientific accuracy the important fundamentals and noteworthy developments in medical science. There will be no exploitation of commercial products or organizations. The ethical pharmaceutical houses and noncommercial organizations which

participated in the 1939 exhibit have expressed their willingness to continue their exhibits under this policy, which brought them so much public good-will

More than \$1,250,000 was expended in the presentation last year. Although it was designed primarily for the general public, professional visitors last year found many points of interest. Among them were such exhibits as those on allergy, the pneumonia exhibit demonstrating serum therapy and sulfapyridine, the scientific exhibit of the Rockefeller Institute on the newest discoveries in the virus field, the famous Carrel-Lindbergh method of maintaining life in entire organs when outside the body, and the introduction to such new diseases as equine encephalomyelitis

Of interest to the general public, professional visitors, and especially medical students was the effective exhibit on medical education, sponsored by the American Medical Association. One of the best attended exhibits in the Hall of Medical Science, this exhibit presented a concise yet comprehensive picture of the varied elements in a medical education and the high standards in medical training prevalent in this country. The Association was responsible also for another popular feature: the decorative and educational murals on the main aisle in this hall



Mr Government, Professor Bureaucrat, Mr Statistics, Mr Indictment, and the Court Brothers go into a huddle about the bed and Mr Government remarks

"Now Gentlemen, have no concern According to records compiled by the doctors for over fifty years 75 per cent of these cases are entirely normal You see the chances are very favorable and I read somewhere in the doctor books that meddling some interference was bad practice in obstetrics So you see all we need to do is do nothing and everything will be all right"

The other gentlemen nod in silent agreement They wait Mr Citizen paces restlessly about glancing alternately at his suffering wife and at the assembled group Dr Black is in a chair still unconscious

Several hours pass

### Scene II

Mrs Citizen's cries have weakened, she is deathly pale, and is bleeding seriously Mr Citizen is frantic and his face is almost as white as that of his wife He remonstrates with the groups about the bed but they do not even appear to be aware of his existence Dr Black has momentarily roused, he recognizes the case as one of placenta praevia, he attempts to collect his faculties further, but he has been so weakened by his struggles that he again lapses into unconsciousness

The groups of gentlemen are aware that something is amiss but their countenances are serene and they converse loudly with one another

Mr Statistics "There are 4,500,000 red blood cells in a cc of blood in a female of the human species"

Professor Bureaucrat "Indeed? Do you know that since the people have had no doctor's bills to pay and since taxes have increased so wonderfully my departments have certainly flourished? At the present time there are at least three clerks to each doctor and we hope to make for better efficiency by increasing this number to six A further increase of taxes will create a much better feeling among our employees as salaries can again be raised"

Mr Government "Pardon me, gentlemen, but apparently there is a slight hemorrhage here You recall perhaps that 'pump-priming' treatment I discovered some time ago So far it has worked very well and we

still have almost 10 billions to go before we hit that 50 billion mark If there were a little more blood available (and he glances at Mr Citizen) By the way, Mr Statistics, how many red cells in the male as compared with the female?"

Mr Statistics "There are 5,000,000 red blood cells in a cc of blood in a male as compared with 4,500,000 in a female"

Mr Government "Aha! I suspected that Hoarding! And think of the economic waste Just think, we can with perfect safety lose practically all the blood of case No 563,129 We then can take her husband's blood and for each cc we transfer we shall have a pure profit of some 500,000 cells

(Turning to the Court Brothers) That wouldn't go against your constitution, would it, gentlemen?"

Mr Citizen, crazed, rushes from the room and cries

"Dr White, Oh! Dr White, help us! Where are you, Dr White?"

### Scene III

The next morning

Dr Black feebly stirs, opens his eyes, and staggers to his feet A large official envelope falls from his lap The room is deserted He picks up the envelope, notes that it is addressed to him, tears it open and reads to himself as follows

Dr U R Black

Sir

Enclosed please find death certificate blanks which you will complete in quadruplicate in re case No 563,129 Kindly send one copy immediately to Professor Bureaucrat, one to Mr Statistics, one to the Court Brothers, and one to me It is imperative that our records be adequate

Do not forget to place stamps on envelopes Stamps can still be procured at 5 cents each

Signed,

Mr Government

P S Mr Citizen, of course, must make the usual arrangements with a mortician at his own expense We expect, however, that after the first of next year we may be able to render this service, like medical service, entirely free of charge to all our people

Mr Government

The New York Polyclinic Medical School and Hospital announces a special lecture by Dr Russell L Cecil, professor of internal medicine, on Wednesday, April 10, at 2 30 P.M. on "Pneumonia—The Clinical Status of Classification and Types Modern Methods of Diagnosis Rabbit Serum Versus Horse Serum Discussion

of Sulfapyridine and the Newer Sulfonamide Derivatives"

They also announce the establishment of a special clinic for the hard of hearing New patients are received on Tuesday and Thursday at 2 00 P.M. The clinic is under the direction of Dr Samuel J Kopetzky

"I used to wonder why people should be so fond of the company of their physician 'til I recollected that he is the only person with whom one dares to talk continually of oneself, without interruption, contradiction or censure"—Hannah More

The president of the Ladies Auxiliary of the County Medical Society announced a "White Elephant" party Each lady was to bring something that she had no use for but did not want to throw away Ten members brought their husbands—*Medical World*

# Annual Reports

## MEDICAL SOCIETY OF THE STATE OF NEW YORK

1939-1940

### Report of the President

#### *To the House of Delegates, Gentlemen*

When one has lived in a house for a time, every room, window, corridor, and closet becomes well known. Inasmuch as I have been a resident of the official family of our State Society for some time, I presume to set forth for your consideration these observations and recommendations.

**Toll of Death.** Our toll of death has been heavy in the last year. In the death of Dr. James H. Borrell, president-elect, we lost an executive of ability and capacity. He had been well trained for his responsibilities and possessed a clear insight into the problems confronting organized medicine in the state. In the death of our two past-presidents, Dr. James E. Sadlier and Dr. George M. Fisher, the former the chairman of the Board of Trustees, we are deprived of their sage advice and sound wisdom. These men, whose intellects and energies were always at the command of our State Society activities, will not be easily replaced.

**Cooperation.** I express my thanks and appreciation for the whole-hearted support of the Council, officers, and personnel of the administrative staff. Their unswerving loyalty and untiring efforts toward the attainment of our purposes are most praiseworthy.

**Journal and Directory.** The tremendous improvement in the *JOURNAL* and *Directory* is outstanding. We look for and expect improvement, but this has been accomplished in a very short time. It has been done only by careful planning and a devoted application to details. Merit in printed matter does not "just happen." Elsewhere will be found the details of the cost of these publications. Costs are lower for quality than at any time in the history of our Society.

**Publicity.** During the past year much progress has been made in acquainting the public with medicine's views and aims. The director of the Public Relations Bureau, because of his wide knowledge of the methods of the press, has been able to present, as news to the public, facts that otherwise would have been unknown and unthought of by the reading masses. Increasing use of the facilities of the Bureau has been made by the members of the Society. The formative and developmental stage of this pioneer work is past, and it now begins to function at a high level of accomplishment.

**Woman's Auxiliary.** The greatest values of the Woman's Auxiliary to organized medicine remain to be developed. I am much impressed with the enthusiasm and activities of those

auxiliaries that have been already formed and are functioning. I recommend that help be given to extend the organization into counties where it is not yet operating.

**Medical Expense Indemnity Insurance.** In the endeavor to provide medical care of high quality to the lower income group, medical expense indemnity insurance has been set up in accordance with the principles outlined by the American Medical Association and this House of Delegates. As is true in all other forms of insurance, the payment of a yearly premium into a common fund forms a buffer or shock-absorber against the sudden financial calamities of sickness. We have been slow in getting our machinery into motion due to the importance of perfecting workable plans. At last some of the groups are ready to function and we may look forward to the establishment of a service which will remove a large part of the dissatisfaction caused by the inability of people to pay for catastrophic illness.

I recommend that such committees be appointed by the president as may be necessary to assist and advise our membership in forming insurance groups throughout the state.

**Medical Relief of the Indigent.** The plans and proposals to indemnify physicians for services to indigents have moved at a snail's pace. It is apparent that the need of officials to make a favorable financial showing together with the irritating clerical details required of the physician have produced a lukewarm attitude on our part. In these times of near tax revolt I am skeptical as to any substantial amount of money being allocated for professional fees, despite the good intention of both the government officials and the physicians of the state to cooperate. Is it the fault of neither officials nor physicians but of the essential fallacy of paternalism?

**Preventive Medicine.** Medicine must not lose sight of the need for further development of its offices in the prevention of disease. This part of our work is clearly educational. It calls for encouragement of the activities of our members who feel that the physician's influence should extend beyond the consultation room, the sick-room and the hospital, into the club, the school and the public platform.

**Policies, Procedures, and Administration.** I heartily recommend that the House give its attention to the limitation of activities and the boundaries of function of our structural bodies.

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**Policies, Procedures, and Administration.** I heartily recommend that the House give its attention to the limitation of activities and the boundaries of function of our structural bodies.

Prior to the adoption of our recently amended Constitution and Bylaws, various committees overlapped in their work, delegated to themselves problems and solutions, and in many ways duplicated efforts. Our present structure indicates that it is the intent of the body to function under a tripartite government by the House of Delegates, the Council, and the Trustees.

I recommend that steps be taken to clarify the following concepts regarding structure and function:

1 The House of Delegates should determine policies but not specify the methods by which these policies shall be effected.

2 The Council should administer these policies and outline methods after mature study of the problems involved.

3 The trustees should conserve the finances of the Society.

4 The executives, in accordance with instruction from the Council, should proceed

with executive management of the institution.

There is ever present the possibility that the Board of Trustees, vested essentially with a financial responsibility may, in their zeal to be faithful to the trust reposed in them, defeat the will of the House of Delegates and the Council by nonappropriation of funds, a privilege that reposes in the Trustees as constituted. This is less likely to happen when the requests placed before them are maturely thought out and clearly presented.

**Conclusion.** My final words are those of thanks and appreciation for the opportunity I have had to serve you. The district and county societies and other various organizations before whom I have had the honor of appearing in my official capacity have been courteous, cordial, and hospitable. To each of them I extend my thanks.

Respectfully submitted,

TERRY M. TOWNSEND, M D, President  
March 9, 1940

## Report of the Secretary

### To the House of Delegates, Gentlemen

In this interesting administrative year the work of the Society has gone steadily on in the usual established fashion with certain aspects deserving your special attention.

**Membership**—Elected in 1939 were 1,108 new members. The net increase as shown in the second table below was 608.

Membership—December 31, 1938	15,726	
New Members—1939	1,108	
Reinstated Members—1939	204	17,038
Deaths	212	
Resignations	136	348
		16,690
Dropped for nonpayment of dues—December 31, 1939		342
		16,348
Elected and reinstated after October 1, 1939, and dues credited to 1940		437
		16,785

Honor counties include Allegany, Cayuga, Chemung, Chenango, Clinton, Delaware, Essex, Genesee, Greene, Jefferson, Lewis, Montgomery, Ontario, Orange, Orleans, Otsego, Rockland, Tioga, Tompkins, and Washington.

Comparative totals in the period of continued rapid increase that began in 1935 follow:

1934	13,172
1935	14,064
1936	14,662
1937	15,529
1938	16,177
1939	16,785

**Biographical Register of Physicians**—The secretarial duty of keeping up to date the biographical record of all physicians, members, and

nonmembers registered to practice in New York State this year reached proportions that have called for the addition of first one and now a second to that unit of the clerical force.

The professional data secured reveal certain facts that arrest attention. The relative proportions of graduates of in-the-state medical schools, colleges in other states, and foreign schools show a definite trend of the two latter groups to grow faster. In part, of course, this must be due to the large numbers exiled from abroad, with New York as the port of entry.

As was shown by Dr. Joseph S. Lawrence<sup>1</sup> in his sixty-year analysis of physicians compared with population in the state, the increase of physicians has been so great of recent years that the ratio stood at 576 per doctor. This seems to raise, possibly, questions as to what the "saturation" point may be and what could be done about it if that point be passed.

**Principles of Professional Conduct to New Licensees in New York State**—In accord with your instruction, letters have been sent to new licensees with copies of the *Principles of Professional Conduct* pamphlet and lists of the county medical society secretaries. The letter follows:

'We have been informed that you have recently secured a license to practice medicine in the State of New York. I am taking the occasion to write to advise you that, if you should register your license to practice medicine with some one of the County Clerks in the state, you would then become eligible to apply for membership in one of the sixty-one county medical societies.

"Election to membership in a county medical society automatically brings membership in the Medical Society of the State of New York and in the American Medical Association. The membership of this State Medical Society is—

'Under instructions from the House of Delegates of the Medical Society of the State of New

<sup>1</sup> A Study of the Distribution of Physicians in New York State. N Y State J Med 39: 100 (Feb. 1) 1939.

York, I am enclosing herewith a copy of the *Principles of Professional Conduct* which govern the professional behavior of all members of this Society

'I enclose also a list of the names and addresses of the secretaries of all component county medical societies''

The first mailing of 250 occurred on receipt in June, 1939, of the list from the late Dr Harold Rypins. Following his death there was a delay until February, 1940, when 1,100 names were received. Necessarily, some of these had already been elected to membership through the county societies, and steps were taken to check in order to make sure that they received copies of the pamphlet

In this connection, it is your Secretary's intention, subject to your approval, to send to each new member a letter of welcome into the Society

In the end, it would become routine that each new licensee receive notice of his eligibility for membership—when his license is registered—with a copy of the principles, or a letter of welcome with a copy of the principles if he has already become a member

*Directory Data*—From the biographical register the various designations are drawn and from time to time decisions have to be made about inclusion of new facts. This year the idea has been advanced of indicating the internship record of each physician listed. The practice for a long time has been to show this by indirection—only by membership in hospital alumni associations. Necessarily that is quite incomplete. It has seemed to your Secretary that full, accurate, and properly checked information would be of value to all readers of the book. Necessarily, such a change in method would entail more work and probably some added expense of compilation. On the other hand, intern experience is of prime importance to the physician's development, and the hospitals have been arranging and enlarging intern services with an eye to the future

*New York Office*—As reported by the Council, the move to 292 Madison Avenue will take place on or about April 15, 1940. This will allow a most desirable arrangement on one floor of the different business activities previously separated

The layout may be described as based on the mechanical work for all departments with addressograph stencil files and mimeograph JOURNAL wrappers all material from the Public Relations Bureau from the Workmen's Compensation Bureau from the Council and general correspondence, together, are now so large as to keep this mill going at full speed. Easy access can be had from all quarters in the future

The executive department is housed in three corner rooms which can each month be turned into a Council meeting room by rolling back 'accordion' walls. For smaller meetings, two of these rooms can be used together. In this way space is economically usable. JOURNAL compilation and business biographical register work and files *Directory* compilation, membership roster and stenography have been provided for in convenient fashion. For Workmen's Compensation, the director's office will be useful for the many small conferences needed to adjust situations for physicians that arise in the course of their work in that field of practice. It is your General Manager's confident expectation that

this change will save time and labor and make possible expeditious response to all calls

*Council Bulletins*—In accord with your instructions Bulletins of Council Proceedings have gone to county societies after Council meetings. These have contained the significant actions omitting the routine details. Comments will be welcome as an aid to making the bulletins as useful as possible

*Coordination of Activities*—It is with satisfaction that your General Manager expresses his conviction that the present Council and Council Committee machinery was wisely devised. It has now been in operation for its first three years—the period for which each of its three classes of councilors are elected. With a normal change in personnel its members have been at the helm long enough to have become fully versed in the duties of the body. The result has been an admirably quick and sound succession of decisions on many subjects that require fine judgment as well as complete knowledge. I offer to that body, with great personal pleasure, my secretarial congratulations

The committees of the Council to whom were assigned particular duties have fulfilled their obligations with commendable speed and no duplication of effort, and many of the matters studied and followed up this year have been of more than ordinary import to health

Particularly intriguing has been the picture that has been drawn of the possible stabilizing of the practice of medicine in such a way that a person can retain his own doctor throughout life.

Beginning with the indigent, and to these can be added the near indigent, the medical-relief arrangements proposed by the Society give these their chosen physicians who they know will be suitably recompensed. A higher economic level having been attained individuals with their doctors can march in column of twos into the new hospital and medical indemnity insurance.

It has been a privilege to aid the committees charged with postgraduate education, public health matters, malpractice insurance, and the annual meeting program. They have continued their work as before and expanded it where needed. The importance of the work of the Compensation Bureau and diligence of its director, Dr Kaliski, deserve comment. As shown in the Council Report the total financial value of this work to the physicians qualified is very large in actual dollars

To the Publication Committee I want to extend my sincere thanks for its great help in advising as to management of the JOURNAL from literary and business angles

I also wish to record my compliments to the Bureau of Public Relations and its director, Mr Dwight Anderson, for its valuable work during a trying year. It has been my privilege to see the medical publicity in the making, and the job has grown larger and more needed

I cannot close this report without registering my thanks to the clerical staff for its loyal and unflinching devoted efforts under the efficient supervision of Miss Dougherty. It has been a year of unusual demands on time and speed and these have been met cheerfully and effectually

Respectfully submitted  
PETER IRVING, M D Secretary

March 18 1940

## Report of the Council

### To the House of Delegates, Gentlemen

Your Council has the honor to report on its executive and administrative management of the affairs of the Society during the period following your last meeting on April 24-25, 1939. The various matters before it are here presented in five successive chapters.

### Part I

#### Postgraduate Medical Education

The personnel of the Committee on Public Health and Education this year remained the same.

Thomas P. Farmer, M.D., *Chairman*, Syracuse

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The following report covers the educational part of its duties.

*Postgraduate Courses*—The interest manifested by county medical societies in the weekly postgraduate lectures not only has been maintained but is constantly increasing. The following courses were given between July 1 and December 1.

Delaware	Pediatrics
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Because of the limited appropriation made to the Committee for its work, it is questionable whether any more courses can be given during the current year, although it is more than probable that the Committee will have requests from other county societies for such courses. It is even doubtful that some of the above-mentioned courses can be financed out of the appropriation. The reports from county societies indicate that the lectures in all the courses were very well given. The outlines of some of the courses have been dropped from the Committee's list, others have been revised, and new courses have been added. A new course on neurology was given to two county societies. Outlines of each lecture were furnished to the physicians attending and practical laboratory demonstrations were made available. No matter how much the Committee may desire to extend or expand its work in postgraduate education, there is no doubt at the present time but that the weekly lectures in the county appeal to physicians more than any other type of instruction.

*Institute on Nutrition and Diet*—As mentioned in the report to the last House of Delegates, an Institute on Nutrition and Diet, open to all physicians in sessions, was held on the following dates: October 18 and 25, November 1 and 8. Although it was originally planned to charge a registration fee of \$10 for the full course, the registration fee was omitted because the State Department of Health took a decided interest in this venture and offered to subsidize part of the expenses. While the attendance was not so large as it should have been, nevertheless it was very satisfactory, particularly from the standpoint of the type of physicians who attended. The number who applied for admittance to this course was 201. The number who attended at least one day of the Institute was 177. The total number who attended all the sessions was 38. Because of the widespread interest in this Institute, especially among those who were not physicians, applications were received from other than physicians and requests for information concerning it were received from Philadelphia, Cleveland, Montreal, and the Hawaiian Islands. The total number of applications from physicians was 131. The total number of physicians who attended at least one day of the Institute was 108 and the total number of physicians who attended all the sessions was 23. Those others attending the Institute were mostly dietitians, teachers of dietetics, public health nurses, nutritionists, and persons doing research connected with dietetics and nutrition.

The difficulty in the selection of speakers was a greater task than was at first realized. Six talks were given each day, three by physicians and three by nutritionists or dietitians. The State Department of Health and the State Medical Society paid vouchers for traveling expenses and honorarium fees to the extent of \$988.85. Of this amount, the State Department of Health paid \$593.80, and the State Medical Society paid \$395.05.

This does not represent the entire cost of the Institute, as the work of organization was financed entirely by the State Medical Society and as there was no charge made for the use of the auditorium and the services connected with it at the Medical College of Syracuse University. The Dean of that College felt that the College desired to make this contribution as part of its interest and activity in this form of education.

From the experience with this Institute, much has been learned. Physicians, at least in New York State, are not willing to pay registration fees for postgraduate courses, nor are they ready to travel long distances on four separate days. It is the belief of the Committee, however, that there is a growing tendency for physicians, and especially the younger men, to desire postgraduate work of a higher plane, along the lines of a seminar. While the Committee would not favor repeating this experiment next year, it does feel that the enthusiasm with which this Institute was received would warrant another attempt being made within the near future.

In connection with this Institute, a radio talk by one of the speakers was given from radio

station WSYU in Syracuse, late in the afternoon on each day of the Institute. The Institute was opened by the Dean of the Medical College of Syracuse University, Dr Herman G Weiskotten. Among others who acted in this capacity on other occasions during the Institute were the president and secretary of the State Medical Society a representative from the State Department of Health, members of the faculty of the Medical College of Syracuse University, and presidents of the local medical societies in Syracuse.

Many gratifying letters have been received by the Committee from those attending the Institute, as well as some of the speakers and from persons outside the state, who were furnished complete copies of the outlines of the talks when they were unable to come to the Institute itself. One of the attractive features of the Institute was the fact that mimeographed outlines of each talk, prepared by the speaker, were placed in the hands of those attending the lectures, before the lectures were given. These outlines provided a permanent record of the content of each talk, and aided in bringing out questions during the discussion period. Several requests were received by the Committee that the lectures be published, but, as this seemed to be too much of a financial involvement, this request was not acceded to. However, a complete set of outlines was sent, without charge, to those who had requested publication of the lectures. The editors of the State JOURNAL were very kind in carrying several announcements of the Institute and Mr Anderson was very diligent in looking after all matters of publicity of which the Institute received a great deal.

**Pneumonia Control**—Because of the recent introduction of the newer drugs in the treatment of pneumonia, the Committee, as well as the Advisory Committee on Pneumonia Control to the State Department of Health, felt that the State Medical Society should repeat the work done two years ago in furnishing programs on pneumonia free of charge to county medical societies. The Committee had some doubts as to whether this subject would appeal to county medical societies after it had been covered so well and so recently but the reaction of the county medical societies in asking for such programs has proved that without doubt, physicians would not only greatly welcome such programs but honestly desire them. As a result, such programs have been given, or will be given in thirteen counties this year, and it is quite probable that more county societies will request these lectures before July 1. In arranging these programs for county medical societies, the State Department of Health has paid honorarium fees to the speakers and the State Medical Society has paid their expenses.

**Expenses**—The attention of the House of Delegates should be drawn to the fact that as compared with many other states, several of which are much smaller in population the amount of money paid for postgraduate medical education in New York State is considerably lower than in these other states, despite the fact that the program for this work is considerably broader in New York State. This probably is explained mostly by the fact that a great deal of the work in New York State is of a voluntary type and, despite this fact, is done by men of

high caliber who would prefer to do much of this work without remuneration than to charge what their services would rightly be worth. Considerable care about arranging the location of the lectures and having nearby counties have the same course on the same day has done much to reduce the expenses. Also the work done by county societies and academies of medicine in the larger centers of the state has filled a need that is necessary in other states but not in New York. In these other states mentioned, considerable of the expense has been paid by voluntary organizations, but even then, the contributions by some of these state societies with a much smaller membership have been greater than the appropriation made for this purpose in New York State.

### Public Health Matters

**School Health Program**—As directed by the House of Delegates, the Council Committee on Public Health and Education has made a study of the entire school health program. The Committee had inquired into this matter to a slight extent at the Council meeting held before the last meeting of the House of Delegates and was directed by the House to continue this study, with the privilege of asking other persons connected with either governmental agencies or private organizations to join with it in this study. The Committee has held two meetings given over entirely to this study. The first one was held at the Grand Union Hotel in Saratoga Springs, on Tuesday, June 27 at 4 30 P.M. The meeting was held at this time so that it would concur with the annual meeting of the New York State Association of School Physicians. At that meeting, thirty-one persons were present. This group included representatives of the Council Committee on Public Health and Education, the State Department of Health, the State Department of Education, the State Medical Society, the New York Academy of Medicine, the New York State Association of School Physicians the American Academy of Pediatrics, the Westchester County Medical Society, and a large number of individuals each representing various groups. Because of the complexity of the study, it was suggested that some representative from each of the various groups present its opinions on the subject, and, after the larger groups were covered, any others who wished to speak might do so. It was requested that each person speaking send to the chairman an abstract of his statement, and all the others present, regardless of whether they spoke or not, were invited to do the same.

As a result a large number of opinions were received from individuals and one from a committee of the New York State Association of School Physicians. While these statements voiced many opinions, nevertheless they were helpful in indicating the general feeling of the entire group. Mimeographed copies of these statements were sent to all who had been invited to this meeting, whether they had been present or not as well as to other persons with whom some communication had been held concerning the matter.

The committee held a second meeting on February 17, 1940, at 10 00 A.M., at the Hotel Roosevelt in New York City, to which the entire group invited to the first meeting was



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the Division of Laboratories and Research of the State Department of Health and the State Medical Society, and it is trusted that no extraneous subject will cause a rupture in this harmonious situation

**Ophthalmologic Problems**—At request of the Committee the Council appointed an Advisory Committee on ophthalmologic problems which will be available for advice in handling matters dealing with education and public health work in the field of ophthalmology

Conrad Berens, M D ,	Chairman	New York
H W Cowper, M D		Buffalo
Thomas H Johnson, M D		New York
Searle B Marlow, M D		Syracuse
Albert C Snell, M D		Rochester

**Cancer**—The Committee on Public Health and Education has cooperated with the State Department of Health in organizing the new Division on Cancer in that department. It has been of assistance in advising and approving of the various forms to be used in that division

**4-H Clubs**—The Committee has continued to offer its services to the 4-H Clubs, particularly with the work of examining these children.

## Other Matters

The management of the State JOURNAL has very kindly arranged for all public health notes appearing in the JOURNAL to be submitted through the Council Committee on Public Health and Education. From time to time an article prepared by a member of the Committee will appear in this space so provided

During the past year, two private practitioners offered a private postgraduate course on *Needle Surgery* to be given in Syracuse and in New York City. This information was transmitted to officers of the New York County Medical Society.

At the present time the New York State Temporary Legislative Commission to Formulate a Long Range State Health Program is formulating legislation that it is important that the physicians of the state understand clearly. This includes legislation to demand the completion of *one year's internship* in fully approved hospitals before being given a degree or a license to practice. Another demands that all hospitals have at least one intern or resident physician present at all times, on their staff. Another bill that has been proposed has to do with the licensing of specialists. Many of these bills have a noble purpose but they are proposed by persons who are not well informed on the subject, and these bills may cause more harm than good.

## Maternal Welfare

The Special Committee on Maternal Welfare appointed by the House to report back through the Council consists of

Charles A. Gordon, M D ,	Chairman	Brooklyn
James K. Quigley, M D		Rochester
Ferdinand J Schoeneck, M D		Syracuse

The Committee report made in February was accepted by the Council. The report, including certain recommendations adopted, follows

'State health departments in every state have departments of maternal health and are actively engaged in this work. Forty-two, or 85 per cent, of the state medical societies have committees on maternal welfare. The Medical

Society of the State of New York is doing but little in this field, as the most substantial work is being done independently by county societies, particularly in Erie, Kings, Monroe, New York, and Onondaga, and in Bronx, Queens, and Westchester. In all, thirty-three to thirty-six county societies have committees on maternal welfare, but this Committee is not aware of their activities as all county society committees operate without the sponsorship or guidance of the State Medical Society.

'That there is need of a comprehensive program for the entire state is clear from State Department of Health reports, which show mortality rates higher in many communities than they need be. Even in those cities and counties that have shown startling reductions in the maternal mortality rate, effort must be continuous so that gains may be maintained.

'Throughout the country, the most progress has been made where close cooperation exists between public health officials and state medical societies.'

The following are the recommendations adopted

- 1 'That it be permitted to set up an Advisory Committee on Maternal Welfare, and an Advisory Committee on Fetal and Neonatal Mortality.

'These advisory committees should consist of eight to fourteen members, obstetricians and pediatricians of high standing, distributed as of district branches or geographically to the best advantage so that they may cooperate with us in proper organization of the state.

'These committees should meet once with the Committee on Maternal Welfare at the State Society meeting, and then carry our message and program to the counties for which they are responsible. This decentralization should get the results we desire. This Committee will be glad to assist the president in the appointment of advisory committees.'

- 2 That it be given space in the *New York State Journal of Medicine* for publication of material for the general practitioner under the heading of Maternal Welfare.

- 3 'That funds be set aside for the use of this Committee in setting up an exhibit at the State Society meeting and the A.M.A. meeting. A sum of \$200 is estimated as the approximate amount necessary.

- 4 'That, if practicable, Dr Farmer's committee and this Committee cooperate in the matter of postgraduate lectures in obstetrics.'

## Part II

### Medical Relief

Through its Council Committee on Public Relations and Economics

Augustus J Hambrook, M D , Chairman

Herbert H Bauckus, M.D	Troy
Louis H Bauer, M D	Buffalo
James M Flynn, M D	Hempstead
	Rochester

a steady drive has been made to accomplish reforms in the field of medical care of the indigent and near indigent. Dr Lawrence and Dr

again invited. Twenty-one were present at this meeting. The matters that seemed the most pertinent in the statements received greater consideration. This group decided that its aims should be to provide the best type of health service possible for all school children, whether attending public or private schools, in order to impress on the child what should comprise good medical care, and that the advice given to children should be based only on complete and careful examination. It was suggested that the person in charge of determining these affairs should be a pediatrician, but this was later amended to read a man qualified to give good pediatric care.

This was not intended to mean that the Committee favors inspection rather than examination of children. The general consensus of opinion of the group was that the grouping of school physicians and the physical educators into one body was detrimental to the school health work and that this had become more so as greater emphasis had been laid upon physical education during the past few years. The group felt that there was a place for the physical educators and also for the school physicians, but the difference in their responsibilities and duties should be made more distinct. It was the general feeling that work that was distinctly of a medical nature should be under the direction of a physician who should be responsible to the executive administrator or school boards, and not to them through an intermediary person who was not a physician.

On the other hand, the group felt that matters that were of an educational nature should be in the hands of those who were trained to be teachers. It was the consensus of opinion of the group that if this matter were properly solved and a capable individual placed in charge of the work, many of the other problems connected with the school health work could be more readily solved by executive action rather than by change of the laws. The Committee felt that the matter of setting up standards for qualifications of school physicians, in the questions of salaries, etc., should be delayed until this vital question had been settled.

The committee therefore recommends that a change be made in the organization of the present Division of Health and Physical Education, preferably that the present bureau of health service be transferred to the State Department of Health, but that if this is not possible, such a division be organized in the State Department of Education, and that to it be assigned all medical problems, while the teaching of health, including physical education, be left, as at present, in the Division of Physical Education of the State Department of Education, so that the teaching of health would be in the Department of Education, as heretofore, while the supplying of health service would be either in the State Department of Health or in a separate division headed by a medical man. Because of their official positions, Dr Maxwell and Dr Mosher of the State Department of Education were excused from voting on any of the issues brought up.

**Public Health Laboratories**—A memorial regarding the more effective use of laboratories in the control of communicable diseases was received at the Council meeting of the State Society, on May 11, 1939, and was referred to the Council Committee on Public Health and

Education for further study. It was the opinion of the Council of the New York State Association of Public Health Laboratories that (1) laboratory facilities of high quality are available to nearly all the physicians of New York State, and (2) a large number of physicians (approximately 30 per cent of those in practice in the state) make entirely inadequate use of the laboratory facilities that are readily available for the diagnosis and control of communicable disease. It was particularly noted that many patients with syphilis were still admitted to institutions without having a complement fixation test, and a high percentage of patients with pulmonary tuberculosis when first diagnosed were found to be "far advanced" or "moderately advanced" without a sputum examination having been made. It was further claimed that many patients with pneumonia had neither an examination to determine the type of pneumococcus present or a blood culture made. In view of the tremendous expansion of tests made in public health laboratories and the demand for larger budgetary appropriations, and also because of the tremendous amount of educational work that had been done with the profession regarding the need of bacteriological examinations in pneumonia, syphilis, and tuberculosis, it seemed hard to believe these contentions. The Chairman of the Council Committee on Public Health and Education was invited to confer with the Council of the New York State Association of Public Health Laboratories regarding this matter. Before doing so he talked with various persons whose opinion would be considered authoritative on this matter and it was the feeling of all concerned that the Association of Public Health Laboratories, particularly Dr Mackenzie and Dr Wright, had become very much excited over this condition. Both of these physicians wished the State Medical Society to take drastic action against physicians who were lax in making adequate use of the laboratory. The Chairman of the Committee felt that such action was unwise, and certainly until more adequate figures were obtained concerning the matter. In place of publishing the memorial in the State JOURNAL it was arranged that

- 1 A report from the Council Committee on Public Health and Education regarding inadequate use of available laboratory facilities by physicians be published in the State JOURNAL of Medicine
- 2 That public health committees of the various county medical societies be requested to study the matter locally in their counties. In this study the cooperation of the director of the county public health laboratory to be solicited
- 3 That county medical societies be requested to include on their scientific programs one talk each year dealing with the work of the laboratory
- 4 That a further and more reliable statistical study of the facts be made as to how many physicians fail to use the laboratory
- 5 That an effort be made on the part of the New York State Association of Public Health Laboratories to see that the directors of county laboratories utilize efficiently their opportunities for overcoming this problem

The most amicable relationships exist between

cash indemnity medical insurance. It instructed its Committee on Legislation 'to support legislation for amendment of the insurance laws which would permit nonprofit medical insurance.'

"With this cooperation and support, a bill introduced at the request of the State Department of Insurance became a law. It amended Article IX-C, effecting an enabling act which would permit the setting up of nonprofit organizations and which would prevent a single such corporation from writing insurance for both hospital care and medical care. The Council expressed the wish that nonprofit insurance agencies supplying cash indemnity for medical expense should cover medical care in the home, in the physician's office, and in the hospital. Thus did the American Medical Association and the Medical Society of the State of New York take part in the creation of nonprofit Voluntary Medical Expense Indemnity Insurance. Physician and layman may now view such insurance as having in principle the full approval and support of organized medicine.

"Subsequently the 1939 House of Delegates of the Medical Society of the State of New York adopted the following

#### TENTATIVE BASIS AND SUGGESTIONS FOR MEDICAL INDEMNITY EXPENSE INSURANCE

"1 It must be nonprofit

"2 It should involve cash indemnity and not medical service

"3 Patients must have absolute freedom of choice in selecting a duly qualified physician from all those qualified to practice and willing to give service within the locality covered by the operation of the company

"4. No third party may be permitted to come between the patient and his physician in any medical relation. The method of providing service must retain a permanent confidential relation between patient and the physician.

"5 The fees should not be below those of the workmen's compensation schedule, but there must be no interference with higher fees being charged to the higher income group

"6 All features of medical service must be under the control of the medical profession, such control to be exercised by or under the direction of the Medical Society of the State of New York or one of its component county societies

"7 The eventual aim of any plan should be to cover medical care in the office, home, and hospital

"The Council further directed its Committee on Public Relations and Economics to study this subject and it gave its approval to the appointment by the president of a special subcommittee to assist and advise with county medical societies who may wish to effect creation of nonprofit organizations for medical expense indemnity insurance under Article IX-C of the amended Insurance Law of the state. Notification of this action was promptly made to each county society. To each county society secretary was mailed a sample pamphlet or prospectus believed to present a prac-

tical outline for organization. The Committee realized that a lack of suitable statistics based on experience greatly increased the many problems of organization and attempted to provide to interested groups such information as became advisable. However, it governed its conduct in accordance with the wisdom of Article III of the Platform of the American Medical Association, viz, 'The principle that the care of the public health and the provision of medical service to the sick is primarily a local responsibility.'

"It may be pointed out that Article IX-C of the State Insurance Law recognizes this principle as it restricts the size of the district in which a corporation organized to carry on medical expense indemnity insurance may operate. It also mandates that all duly licensed physicians in the district may become members of the corporation

"The organizers of a proposed medical expense indemnity corporation prepare a certificate of incorporation in which is stated the name of the corporation, its purposes, bylaws, contracts and agreements, and names of the members of its board of trustees. All such data must conform to the requirements and mandates of the membership corporation law and Article IX-C of the Insurance Law. The first requisite following is approval of the incorporation by the Department of Social Welfare of the State of New York. After this endorsement, the superintendent of insurance of the state, after study and investigation leading to favorable decision, issues a 'Certificate of Consent to Filing' under the provisions of the membership Corporation Law and Article IX-C. The corporation, after making application on a form setting forth certain required provisions, next obtains from the superintendent of insurance a permit to solicit subscribers. This is followed by application to the superintendent of insurance for a license to do business. This application makes certain detailed statements covering the subject of financial responsibility and after examination and investigation the superintendent issues the license to do business unless 'he determines the issuance of such license is contrary to the interest of the people.'

"Those dealing with the State Board of Social Welfare and the State Insurance Department on the subject of organizing medical indemnity insurance corporations uniformly report a most helpful and courteous attitude on the part of these agencies of our state.

"The bylaws of a typical plan state its primary fundamental purpose is to provide adequate medical care for the low-income group in our population. The prospective patient budgets for contingent illness by small prepayment installments. Most of these patients pay by means of a group employment payroll deduction. It has been found that it is of advantage to the employer and to the indemnity corporation if there is a single payroll deduction taking care of both medical indemnity and hospital service costs where the subscriber carries both forms of insurance. It is also advantageous to make use of the same sales service, accounting equipment and business personnel, but neither corporation may issue a combined contract covering both hospital and medical care. The

Irving have taken part, ex-officio, in conferences with the State Department of Social Welfare. The following JOURNAL notice, which appeared in the March 1 issue, briefly outlines the status of this matter as of February, 1940

#### Medical Relief in New York State

On February 8, 1940 the Council of the Medical Society of the State of New York received the following report and directed that it be published. Attention of county medical society secretaries and presidents is respectfully called to the request for local reports on medical relief. These reports are to be sent to Dr Augustus J Hambrook, 40 State Street Troy, the chairman of the Council Committee on Public Relations and Economics. The report follows

'The Committee on Public Relations and Economics regrets that it has to report disappointment in the progress of its efforts to improve the status of medical relief in this state. To the last House of Delegates the committee reported that it had recommended to the State Department of Social Welfare a new setup for the local welfare machinery. A professional advisory committee was suggested for each county, the medical members of such committees to be appointed by the county welfare officer from a list submitted by the county medical society. Other members such as dentists and druggists were to be selected by their county organizations. It was held that all decisions be vested in this committee instead of being referred to the medical social worker. It was determined that there were thirty situations which commonly arise in the administration of medical relief which could be decided locally and thereby obviate need less and unnecessary delays. Up to a few months ago this plan seemed to have the approval of the state department

Included in the program was a revised fee schedule based on the Workmen's Compensation Fee Schedule but with a reduction. It was recognized that the Workmen's Compensation Fee Schedule was the lowest which would permit the doctor to do satisfactory work and still realize a profit for his services. Welfare fees however are paid out of current tax funds instead of from industrial profits as in the case of Workmen's Compensation. It was felt that the doctor accepting these slightly lower fees could accept this schedule as his share of the community burden in the care of the indigent. The Welfare Manual now in force after long discussions with representatives of the State Department of Social Welfare, was revised with apparent satisfaction on both sides

No definite action was taken by the department after several months of waiting. Finally, the commissioner called on November 28 1939 a meeting in Albany with a large number of local welfare officers in attendance from different parts of the state. The committee attended this meeting and the program as previously suggested after two years of work was discussed in general and in detail. The Social Welfare Department later advised the committee that the local welfare officers were not in favor of adopting the proposals of the society

'The committee deems it wise that each county welfare officer be approached by representatives of the county medical societies in the effort to secure first-hand information as to the attitude of each welfare officer on the recommendation of the Medical Society of the State of New York for reorganization and supervision of medical relief in each county with report to the state society committee as soon as possible. The general situation existing at the moment is considered by this committee to be intolerable.

The essential features of the State Society's proposition as presented to the House of Delegates on April 24 1939 are as follows (1) establishment of professional

advisory committees in local welfare districts (2) revision of fee schedules now in force, (3) reduction in the amount of red tape to the minimum needed for quick and accurate management of medical relief and the payment of fees, and (4) retention without exception by the indigent of the physician or physicians of their own choice.

The Committee on Public Relations on March 1, 1940, had a conference with representatives of the Committee of the local welfare officers and of the State Department of Social Welfare. It heard expressed one point of view with which it fully agreed—that the emphasis should rest on local handling in the light of local conditions. The present methods have been far from satisfactory in part because there has been too much centralization of authority, and as a result delayed and arbitrary decisions. A central authority cannot, under existing circumstances, decide a local problem. Annoying red tape and delay have kept many doctors from performing any service under the provisions of the welfare laws

In the matter of professional advisory committees recruited by local welfare officers with the help of the county medical societies, the committee representing the local welfare officers appears to hold back. They have evidently spent much time and thought on "medical directors" to be appointed by the welfare officers. As was stated to the House in 1939, our Committee looked upon medical directors as a valuable adjunct if selected according to carefully drawn qualifications. It at no time considered them as an alternative to professional advisory committees

The Council will continue to press ahead on the lines stated last year. In the center of the picture stands the relief person's own chosen doctor who should be paid from tax funds, local and state, on a proper financial basis

#### Medical Expense Indemnity Insurance

Last fall the sixth district branch at its annual meeting memorialized the Council recommending that a committee be appointed to aid in the creation and launching of nonprofit companies under the State Insurance Law now well known as Article IX-C. This matter had been in the hands of the Committee on Public Relations and Economics, but it was considered wise by all to appoint a subcommittee of three to take over this as its single duty and to report through Dr Hambrook's committee. The personnel of that subcommittee on Medical Expense Insurance is

Herbert H. Bauckus, M.D.,	Chairman	Buffalo
Walter T. Dannreuther, M.D.		New York
William Hale, M.D.		Utica

Its report follows

'The Annual Report of the Council to the Medical Society of the State of New York for 1938-1939 contains a discussion of the subject 'Nonprofit Medical Expense Indemnity Insurance.' There is reference to the declaration of the Special Session of the House of Delegates of the American Medical Association in favor of voluntary cash indemnity insurance and against compulsory health insurance. In full accord with the policies adopted by the Special Session, the Council formally approved the principle of nonprofit

several years, the committee gave serious thought to this study of traffic accidents and deaths and has submitted a tentative list of recommendations to the Bureau of Motor Vehicles as approved by the Council, as follows

All persons applying for an operator's license or renewal of such license must sign a certificate as to whether or not they are suffering from or have ever suffered from, any of the following

- 1 Insanity
- 2 Epilepsy
- 3 Coronary thrombosis or angina pectoris
- 4 Diabetes
- 5 Hypertension (high blood pressure)
- 6 Nephritis (Bright's disease)
- 7 Drug habit
- 8 Physical deformities or loss of an extremity or part of an extremity

Any person who answers in the affirmative to any of the above must furnish a physician's certificate that his disability is now cured or arrested or that he is under constant medical supervision and is physically competent to drive a car with the following additional provisos

In the case of (1) (*Insanity*) he must furnish a certificate from a recognized state or private mental institution that he is mentally competent to drive a car

In the case of (2) (*Epilepsy*) no licenses are to be issued

In the case of (3) (*Coronary thrombosis*) no person will be permitted to drive a car for at least 6 months after an attack and then only if certified by a cardiologist that he is physically competent to drive.

In the case of (4) (*Diabetes*) he must furnish a certificate that he is under constant medical supervision

In the case of (5 and 6) (*Hypertension and nephritis*), he must furnish a certificate that he has no signs of uremia and that his diastolic pressure is not persistently over 125 mm

In the case of (7) (*Drug habit*) no licenses are to be issued

In the case of (8) (*Physical deformities etc.*), such persons must demonstrate to the satisfaction of the Bureau of Motor Vehicles that they are not incapacitated from driving under such restriction as to types of car or special appliances as may be approved by the Bureau of Motor Vehicles

All persons over seventy must be re-examined as to driving ability before the license is reissued

In addition, any person who has been involved in an accident resulting in serious physical injury or death of any person shall not be permitted to drive until he has been physically examined and certified as physically competent to drive. If he is involved in a second such accident, a certificate from a competent psychiatrist will be required in addition

#### M D License Plates

The State Bureau of Motor Vehicles has continued to give to any physician in the state a special M D license plate and this year such applications were made at the motor bureau in the county or city where the doctor resides. The usual application was required, and in addition a prescription blank or letterhead of the doctor to complete identification. The special plate has been accepted by a majority of the physicians,

and it is hoped that this special and signal honor will obviate many troubles of the past and will accord the doctor, not special privileges, but rather less inconvenience in his professional work

#### Saratoga Springs Commission

Members of the Committee on Public Relations and Economics have been asked to act as an advisory body to promote a better understanding of the value of mineral waters as an aid in the treatment of certain physical conditions. As an evidence of their desire to cooperate with the members of the medical profession, The Saratoga Springs Authority has formed a Medical Attending Staff made up of physicians in practice in Saratoga Springs and nearby communities

#### Farm Security Administration

During last summer, the Farm Security Administration, through its representative, Dr R C Williams, sought the State Society's approval for it to contact the county societies in the effort to devise plans for medical care of borrowers of the Farm Security Administration. Dr Townsend, Dr Irving Dr Hambrook, and Dr Louis H Bauer had met with Dr Williams and the situation had been analyzed for the committees on Public Relations and Economics and Public Health and Education which met Dr Williams and other workers of the Farm Security Administration on September 9, 1939

As a result Dr Hambrook's committee recorded its opinion in the following words

'The Committee approved in principle for action by the Council the request of the Farm Security Administration that its representatives be granted permission to contact the County Medical Societies with respect to medical care for the families of borrowers from the Farm Security Administration, with the understanding that the State Society will have told the county societies that it has no objection to their undertaking this activity if they see fit.'

The Council adopted this as its policy and so advised the county societies

It was clearly understood that in order to become a client of the Farm Security Administration a family must meet the following requirements

1 Must be unable to obtain credit from any other source.

2 Must be recommended by local county rehabilitation committee, usually five persons, composed of one or more successful farmers, farm women, and business or professional members of the community

3 Must be located on or be able to obtain farm land

4. Must have the stamina and determination that would indicate a desire for rehabilitation

5 Must be physically able to do farm work.

It was also understood that the patients choose their own physicians that no osteopaths or chiropractors come into the picture, that the county society chooses a trustee as a disbursement officer of the medical funds, that the county society alone passes on the bills, and that the Farm Security Administrators have nothing to say about treatment

#### Sterilization for Expediency in Relief Cases

A request was received from a member as to the legality and ethical medical bearings of

majority of the directors or trustees of the plans are physicians—in one plan there are sixteen physicians and nine laymen. Lay study and discussion are encouraged. Some plans make no income limit restrictions—one plan now operating has a provision in the subscriber's contract specifying that benefits apply only to individuals with an annual income not exceeding \$1,800, to a husband and wife with combined income not exceeding \$2,500, to a family of parents and children with aggregate incomes not exceeding \$3,000. The superintendent of insurance has not agreed to a lowering of the income limits below those outlined in the foregoing schedule. The subject will require further observation and study.

"A sample premium rate may be represented as follows:

"1 Subscribers only—\$18 annually with indemnification for cost of medical care up to \$200

"2 Subscriber and one family member—\$27 for \$300 indemnity limit.

"3 Subscriber and family (including all unmarried children under age of 19) \$36 for \$400 limit. Contracts are for one year and are renewable in all classes.

"Contracts issued to subscribers vary but in general they deny issuance to individuals having certain specified diseases prior to application, exclude workmen's compensation cases, obstetrical service during first year of contract, and certain other insurability restrictions. Contracts call for subscriber payment for first part of services in order to guard against unreasonable usage. Experience will give more needed light on the advantage, necessity, and method of this deduction feature.

"The subscriber patient is protected by the careful supervision of the State Insurance Department and by a contract giving said subscriber free choice of physician, providing for the highest type of medical care. The patient's contract is quite informative.

"The subscribing physician signs with the medical indemnity corporation a contract outlining in various details his agreement to furnish medical and surgical care to the subscriber patient. The physician is paid directly by the corporation and on a pro-rata unit basis.

"It will be observed that it has required considerable time and study before medical indemnity insurance corporations could actually engage in this new business. This is greatly a credit to the supporters and organizers of such plans and reflects the sincerity of the medical profession in this venture for the public good.

"Details of organization and conduct of business will necessarily vary according to the wishes of the local sponsors. We must expect to change and to improve as we increase our practical knowledge. This is a difficult and exacting piece of work. Let no one mistake this. There is a deep human responsibility involved. Successful accomplishment will require frank analysis, determined laborious energy and honest courage.

"Following the experience thus soon to be gained, the Medical Society of the State of New York may well give further thought to encouraging a more active professional partici-

pation in the field of nonprofit medical expense insurance."

### Crippled Children Problems

Complaints from members about the fees allowed by the courts under the Crippled Children's Act have been considered again this year by Dr Hambrook's committee. The fees set in the unofficial fee schedule are apparently unsatisfactory, particularly for long continued post-operative treatment, and certain new surgical procedures are not included.

That schedule was formulated over ten years ago by the then standing Committee on Public Relations. It was intended as a guide rather than a fee regulation. It was never adopted by the House of Delegates but has served as a guide to the state departments in giving approval for state aid under the provisions of this law.

### State Department of Civil Service

The Council early in the year was requested to assist the State Department of Civil Service in developing standard specifications for each class of position of a medical nature. The duties of the classification board is to develop standards both as to basic form and pattern. The cooperation and advice of the medical profession were therefore asked. To both Dr Hambrook's and Dr Farmer's committees was assigned the study of various classifications in the medical group. This matter takes in all departments such as health, compensation, mental hygiene, and other departments of the state having medical members on its quota of employees. Subcommittees were appointed to make an intelligent study and experts outside the membership of the committees were added. This study has not been completed at the present time, but detailed reports to the State Department of Civil Service will be ready before long.

### New York State Public High School Athletic Association

The members of the Committee on Public Relations and Economics have conferred on several occasions with Mr F R. Wegner, secretary-treasurer of the Athletic Association, regarding fees paid for accidents during athletics. The fund is a plan to protect boys and girls engaging in athletics and receiving injuries in games and practices. In its seven years of experience all claims have been paid according to the established schedule. It is felt that a wider coverage and a more active participation of school authorities in this fund might increase the effectiveness of benefits derived.

### Automobile Accidents and Physical Examination of Motor Vehicle Drivers

Dr Hambrook's Committee on Public Relations and Economics reported as follows:

"An invitation was extended some time ago by the State Bureau of Motor Vehicles to discuss the great number of deaths and serious accidents each year caused by drivers handicapped by some disease or physical condition. This is a big problem. Some 3 600 000 driver licenses are issued each year. A very cursory physical examination is required. A classification of physical condition sufficient for exclusion was suggested, and after study of a statistical review made by the Bureau over

seven arbitration meetings were held, fifty-nine in the metropolitan area, and eight in upstate areas.\*

The above represented 858 physicians' bills, awards were made in 767 and no awards in 91 instances. Three hundred and thirty-three were settled before arbitration for bills amounting to \$28,933 11 in which the amount in dispute was \$21,784 50.

In many instances arbitration could be avoided and prompt settlement of a physician's bill facilitated if the following suggestions should be followed by practicing physicians and specialists.

The 48-hour Report (C-104) and the 20-day Report (C-4) and all specialist's consultation reports should be promptly sent to the insurance carrier, as well as to the Department of Labor.\*

Under the rules and regulations of the Department of Labor all specialists and consultants must submit a report of their findings to the Industrial Commissioner, the employer or carrier, and to the attending physician. In failing to send a copy to the insurance carrier, the latter may not be apprised of the fact that consultation was held and may, when the case is reported, call in a consultant of its own, thus increasing unnecessarily costs of insurance. As the result of consultation the attending physician may follow a plan of treatment to which the carrier after its medical inspection may object.\*

Where a case has been previously treated by another physician for the same injury, the succeeding physician should always promptly communicate with the first physician preferably by phone and also by letter, in order to obtain a complete record of the case including all reports of diagnostic procedures regardless of the lapse of time between the treatments of the two physicians. This will avoid in many instances duplication of laboratory and x-ray service. Where a considerable lapse of time has occurred since the last treatment of the first physician, it would be advisable for a physician to communicate with the insurance carrier in order to determine whether the case has been closed and to ascertain the compensable status of the case. Bills have been objected to a number of times especially where long continued treatment was necessary, because the physician failed to call in a specialist or better qualified physician to cope with a complicated or obstinate medical situation. In other words carriers have frequently objected to paying for long continued treatment where, in the opinion of their medical examiner, a general practitioner should have called in a specialist to treat the case. Many times physicians, giving practically only physical therapy treatments have failed to ask for authorization where such treatment exceeded the cost of \$25. Authorization should be requested for such treatment when the total number of visits approach the sum of \$25. Authorization is not required in an emergency or may not be unduly withheld by the carrier or employer so as to jeopardize the welfare of the patient. Where a claimant informs a doctor that the Labor Department or insurance carrier has advised the claimant to return to the doctor for further treatment the doctor should check up to determine the accuracy of the claimant's statement. Where a physician is unfamiliar with the minimum medical fee schedule his bill is often rejected by the carrier or employer. If a physician

is in doubt before rendering a bill, he should confer with the compensation committee or board of his society for advice. It should be borne in mind that authorization should be obtained for a fee in excess of the schedule, but in any event it might be advisable for a physician supplying unusual or extended medical care to apprise the carrier or employer of the procedures being carried out. Progress reports every three or four weeks in long continued cases often result in prompt payment of bills, where failure to so inform the carrier of the progress of the case may ultimately result in objection to the bill.

*Payment of Doctors' Bills in Compensation Cases Where the Period of Disability Is Less Than Seven Days*—For a number of years, the various county society compensation boards have received complaints from physicians who have been unable to collect bills for medical services rendered in bona fide compensation cases where the claimant lost no time from work or less than the usual waiting period of seven days. In some of these cases no files are made up in the Department of Labor. In others, although a file is made up and a hearing posted the injured employee may not appear at the hearing because he is not interested or not entitled to compensation for lost time and the appearance at the Department of Labor entails a loss of one-half or one day's work for which he is not usually reimbursed by his employer. Due to the nonappearance the case is often closed without determination of causal relationship and in some instances as would appear from the complaints received, the employer or carrier fails to pay the doctor's bill.

This matter has been the subject of discussion with the Industrial Council for a number of years in an effort to remedy this situation. The Industrial Commissioner called a hearing on December 19, 1939, at which time this matter was thoroughly discussed, and at the suggestion of the presiding officer, Deputy Industrial Commissioner Michael J. Murphy, the matter was referred to a joint committee of the Compensation Insurance Rating Board and the State Medical Society. This conference was held on January 30, 1940.\*

The discussion before the committee developed that most of these cases fall into two groups, namely, bona fide compensation cases on which there is no dispute and, secondly cases in which a controversial issue is present.

With respect to the first group, the opinion of the committee of the insurance carriers was that, if the carrier sends the Department a C-6 form (notice to the Industrial Commissioner that the payment of compensation has begun without awaiting award of the Industrial Board) or the C-7A form (report to the Industrial Commissioner of the reason payment for compensation has not begun), the doctor's bill should be paid. But if the carrier or employer sends the Department of Labor a C-7 form (which indicates to the Industrial Commissioner that the claim will be controverted), there is no obligation upon the carrier to pay the attending physician's bill until the controversy has been settled. It is in just this type of case where there is a controversy but where the claimant has not lost more than seven days, that the carrier refuses to pay the doctor's bill until the claimant can be made to appear before a referee. While it was the opinion of the Conference Committee that



sterilization operations on welfare clients who have large families

It was understood that this is being done in certain localities in the state with the written consent from husband and wife and *upon the advice and with the consent of county officials*

The Council received from the legal counsel the following brief on the subject of liability of physicians for sterilization of patients both from the standpoint of the civil and criminal law

"It is impossible for me to give any authoritative opinion with respect to the matters embraced in this question since, so far as my research has led me, I do not find that the question has ever been decided by the courts of this state. How the courts would pass on such a question if it were squarely raised is largely speculative, and it is impossible to say just how they would rule

"The subject of liability of physicians for sterilization of patients has been treated in a very interesting article published in the *American Bar Association Journal* under date of March, 1930. You will find in this article that the subject matter has been thoroughly treated, both from the standpoint of the civil and the criminal law

"In the State of New York I do not find any statute expressly forbidding the operation in question. There was passed in 1912 in this state a statute which became Article 19 of the Public Health Law, Sections 350 to 353. This statute provided for the sterilization of the feeble-minded, the epileptic and other defective inmates in state hospitals for the insane, state prisons, reformatories and charitable and penal institutions in the state. Section 353 of that Article provided as follows

"*Unauthorized and illegal operations* Except as authorized by this act, every person who shall perform, encourage, assist in or otherwise permit the performance of the operation for the purpose of destroying the power to procreate the human species or any person who shall knowingly permit such operation to be performed upon such person unless the same shall be a medical necessity, shall be guilty of a misdemeanor"

"The constitutionality of the provisions for sterilization was challenged, and it was held unconstitutional by the courts and the entire Article was subsequently repealed including Section 353 above quoted

"Section 1400 of the Penal Law contains this provision

"*Maiming defined, punishment* A person who wilfully, with intent to commit felony, or to injure, disfigure or disable, inflicts upon the person of another an injury which

- 1 Seriously disfigures his person by any mutilation thereof, or,
- 2 Destroys or disables any member or organ of his body, or,
- 3 Seriously diminishes his physical vigor by the injury of any member or organ,

is guilty of maiming, and is punishable by imprisonment for a term not exceeding fifteen years. The infliction of the injury is presumptive evidence of the intent"

"Whether a prosecution would lie under this statute is not free from doubt. In the article enclosed, upon this point the authors say

"If the consent of the person were given,

it is probable under present day statutes that there would be no liability for mayhem, for consent given would usually warrant the conclusion that malice, a necessary element of the crime, was not present in the mind of the physician. This would not necessarily follow, however, for malice on the part of the operator may exist concurrently with consent on the part of the patient"

"From the standpoint of criminal responsibility of a physician, I believe that if a therapeutic reason exists and the consent of both husband and wife is obtained, in all probability the physician would not be criminally responsible. However, with no authority or precedent to guide us, no definite opinion can be expressed upon this point. It is easy to see that such operation might be accompanied by some danger to the physician, for example, should the patient die in the course of the operation, there might be some charge of a criminal nature made against the doctor. There is also the danger that where the physician obtains a written consent from both husband and wife, they may repudiate such consent claiming that they did not understand the nature of the operation and that they were simply told by the physician to sign a piece of paper. Frequently in my experience in the defense of malpractice cases against physicians, the plaintiff has attempted to repudiate a written consent to an operation

"As to civil responsibility, I believe that if the written consent of the husband and wife is obtained and the operation is properly performed, no civil responsibility would rest upon the physician, although there is no adjudicated case in this State upon that point"

The Council, after full discussion of all bearings, recorded the opinion that to resort to such a procedure without a therapeutic reason, which cannot be stretched to include economics, is unethical and unwarranted

## Part III

### Workmen's Compensation

Through its Committee on Workmen's Compensation, the Council has been able to look out for the interests of the physicians of the state by advising on revisions of the laws, by aiding the county bureaus over the state, and helping with arbitrations and adjustments of other situations. The personnel of the Committee is

Harry Aranow, M D, <i>Chairman</i>	New York
Joseph C O'Gorman, M D	Buffalo
David J Kahski, M D, <i>Director</i>	New York

*Number of Physicians*—A total of 17,470 licensed physicians were qualified by the various county society boards up to February 1, 1940 \*

*Conferences, Meetings, Etc*—The Committee and the Director of Workmen's Compensation have participated in numerous meetings, conferences, and hearings before the Department of Labor, the Industrial Commissioner, the Industrial Board, and the Industrial Council, etc \*

*Arbitrations*—During the year 1939 sixty-

\* Wherever an asterisk appears in Part III matter has been omitted for brevity. A full report may be obtained

seven arbitration meetings were held, fifty-nine in the metropolitan area, and eight in upstate areas \*

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This matter has been the subject of discussion with the Industrial Council for a number of years in an effort to remedy this situation. The Industrial Commissioner called a hearing on December 19, 1939, at which time this matter was thoroughly discussed, and at the suggestion of the presiding officer, Deputy Industrial Commissioner Michael J. Murphy, the matter was referred to a joint committee of the Compensation Insurance Rating Board and the State Medical Society. This conference was held on January 30, 1940 \*

The discussion before the committee developed that most of these cases fall into two groups, namely, bona fide compensation cases on which there is no dispute and, secondly, cases in which a controversial issue is present.

With respect to the first group, the opinion of the committee of the insurance carriers was that, if the carrier sends the Department a C-6 form (notice to the Industrial Commissioner that the payment of compensation has begun without awaiting award of the Industrial Board), or the C-7A form (report to the Industrial Commissioner of the reason payment for compensation has not begun), the doctor's bill should be paid. But if the carrier or employer sends the Department of Labor a C-7 form (which indicates to the Industrial Commissioner that the claim will be controverted), there is no obligation upon the carrier to pay the attending physician's bill until the controversy has been settled. It is in just this type of case, where there is a controversy but where the claimant has not lost more than seven days, that the carrier refuses to pay the doctor's bill until the claimant can be made to appear before a referee. While it was the opinion of the Conference Committee that

medical bills should be honored by the carriers in all cases in which disability does not exceed seven days, provided there has been submitted to the Department the C-6 form or C-7A form, the Conference Committee agreed to carry this matter on its agenda for further discussion \*

*Industrial Dermatitis*—Of all cases of industrial illness the industrial dermatoses represent by far one of the most prolific of occupational diseases. It is estimated that about two thousand claims for dermatitis are filed with the State Insurance Fund alone each year.

Since the very inception of the law in 1935 including industrial dermatoses under compensable illness, there has been general dissatisfaction among physicians with the way in which the law has operated insofar as the medical examination of this type of case is concerned. Cognizance was taken of this situation at a meeting of the Section on Dermatology and Syphilology of the Medical Society of the State of New York at the annual meeting held in 1936. The matter was at that time referred to this Bureau for consideration. A special committee of eminent dermatologists was appointed with the consent of the Council \*

The whole question was again thrown into a conference held by the Medical Conference Committee of the Compensation Insurance Rating Board on January 30, 1940.

The Conference was greatly impressed by the plea of the Director of Workmen's Compensation and agreed that this subject should be placed on a special calendar for future consideration by a group of specialists representing both the insurance carriers and the State Medical Society. It is hoped that in the course of the year sufficient progress may be made to warrant making recommendations to the Industrial Commissioner and to the Industrial Council looking toward a solution of this vexing problem.

*The Question of the Necessity of Further Treatment*—One of the most vexatious problems that has arisen since the amendment of the Workmen's Compensation Law in 1935, giving the injured workman the right to choose his own physician and the insurance carrier or employer the right to make a medical inspection or examination of a patient under medical treatment, has been the attitude of certain insurance carriers in regard to the continued treatment of subacute or chronic cases \*. Your Director has for a number of years been attempting to induce the Industrial Council of the Department of Labor to set up a standard procedure governing this situation and, finally, at long last on January 8, 1940, the full Industrial Council passed the following rules and regulations, which must be carried out by employers and insurance carriers if after a medical examination by their doctor it is their opinion that further treatment is not necessary or advisable.

1 The employer or insurance carrier must exercise their right to have a medical examination made of a compensation claimant by their medical examiner, on which a direction to the attending physician to stop treatment must be based.

2 A request forwarded to the attending physician to stop treatment must be accompanied by a report of the medical examiner employed by the employer or insurance carrier setting forth the physical findings.

3 If the attending physician does not agree with the findings of the medical examiner, he must arrange to confer with the medical examiner for the purpose of reaching an understanding.

4 If the attending physician and the medical examiner are unable to agree, a joint examination of the claimant should be arranged for the purpose of comparing the findings of both the attending physician and the medical examiner.

5 If an agreement cannot be reached on the joint examination, arrangements should then be made to refer the claimant to a mutually agreeable consultant.

6 When a difference of opinion still exists in such cases where the above procedure is followed, such cases shall be referred to the Department of Labor for medical examination or for a hearing at which the attending physician or the consultant shall be subpoenaed to appear by the Department of Labor.

It should be made clear since the injured workman is the primary object of the Workmen's Compensation Law, that in any case even though there is an agreement between the insurance carrier and the doctor that no further treatment is necessary, the injured workman has the right to demand medical care and such right must be respected. In the event that both attending physician and insurance carrier's physician or the consultant agree to the discontinuation of treatment, the claimant has the right to a hearing before the Department of Labor in the final adjudication of this important matter \*.

*Amendments to Section 13 of the Workmen's Compensation Law Proposed by the Department of Labor*—Your Committee on Workmen's Compensation favors a suggestion to amend Section 13-f(2) of the Workmen's Compensation Law to transfer the power to fix fees for the attendance of physicians at hearings from the Industrial Commissioner to the Industrial Board \*. This change will facilitate the administration of this section of the law.

The Industrial Commissioner proposed a change in the law to require physicians to file the C-4 report within fifteen days after the first report, rather than twenty days, as is the law at present. Insurance carriers are obliged to commence compensation payments within eighteen days. In most instances a physician's C-4 report is absolutely necessary to enable the employer or carrier to determine the degree of disability of the claimant. The fact that physicians are now required to file a C-4 report within twenty days, together with the unfortunate experience that many physicians are very tardy in filing their reports, has worked to great disadvantage of the injured employee who is often entirely dependent on his compensation payment in lieu of wages. Your Committee felt that it should assist in the effort of the Industrial Commissioner to speed up compensation payments by endorsing a change in the law requiring the C-4 reports to be filed within fifteen days after the C-104 report with the recommendation that it would not be necessary for the physician to verify the C-4 report \*.

The Department of Labor proposes an amendment to the Workmen's Compensation Law to

require a brief progress report at stated intervals, say three or four weeks, in any case where medical treatment continues beyond the twenty-day period.\*

*Jurisdiction of the Industrial Board Over Medical and Hospital Bills*—Under the old law, the Industrial Board had the right to intervene and determine the fair value of medical and hospital bills. Under the new law with the adoption of a minimum-fee schedule and the arbitration proceeding for the determination of the fairness of medical and hospital bills, the right of the Industrial Board under the law was abrogated.

There now seems to be a need for a change in the law to give the Industrial Board jurisdiction over medical and hospital bills in cases where the employer is not covered by compensation insurance or is not a self-insurer. A similar proposal was made last year but the bill introduced did not come out of committee. Your Committee endorses the bill again this year.\*

Your Committee also favors a change in the law to permit the granting of an appeal under Section 13-c from the decision of the county medical society or board denying an application for a medical bureau or laboratory license. A similar bill was introduced last year and although endorsed by the Medical Society failed to come out of committee.\*

*Qualification of Physicians by County Medical Society Compensation Committees*—One of the most important functions devolving upon the county medical societies is the authorization of physicians to practice under the Workmen's Compensation Law. Under Section 13-b of Chapter 258 of the law, the Industrial Commissioner is empowered to license physicians to render medical care to injured workmen. Not only is the medical society or its board or committee empowered to recommend to the Commissioner that a physician be authorized to render medical care, but it is the duty of the society to specify the character of medical care that the applicant is qualified and authorized to render under the Workmen's Compensation Law. The Medical Society is also required to change the rating of the physician from time to time if he submits evidence of additional qualifications. Up to the present time the Medical Society of the State of New York, through its component county societies and their compensation boards or committees, has licensed 17,470 physicians in accordance with a series of symbols adopted in 1935 to indicate graphically the physician's qualifications. As the result of the experience gained in this work, the Council Committee has evolved a series of standard qualifications. These standards conform to the principle of the Workmen's Compensation Law that a physician be authorized to render such medical care as he is professionally qualified to render and at the same time are in conformity with accepted professional and ethical standards adopted by various national boards for the granting of specialist's diplomas. These standards are flexible enough to enable a county medical society to qualify physicians within its jurisdiction, taking into consideration the standards and customs of medical practice and specialism that prevail in the particular community. While a certificate of a national qualifying specialty board is not prerequisite for authorization as a

specialist, the committees may and usually do demand the equivalent in education, training and experience.

Your Committee has recommended to the county medical societies that wherever possible advisory qualifying committees be set up in the various specialties to pass upon the applications of physicians desiring specialist rating. It was also recommended in the smaller county medical societies, where a sufficient number of specialists is not available to set up special qualifying committees, that the Workmen's Compensation Committee of the County Medical Society be so constituted as to have in its membership or acting in an advisory capacity, physicians who are familiar with the qualification of specialists. Your committee has further recommended and again emphasizes, the importance of giving every physician who applies for a specialist's rating or for a change in rating an opportunity to appear before the Compensation Board or Committee and plead his case in person, especially if his application does not bear sufficient evidence of training and experience to warrant the Committee in acting favorably without such appearance.

In the field of radiology and radiation therapy the committee has, with the approval of the Council, set up a state-wide examining committee to which applicants for radiology or radiation therapy rating can be referred for examination if in the opinion of the local county society compensation committee the candidate, although giving evidence of some experience, does not conform to the full standards for qualification. This Committee has operated for nearly two years and has held thirteen sessions. Forty-three physicians have been examined, nineteen were recommended for authorization and twenty-four were denied a rating.

In the field of surgery, where it has occasionally been difficult to verify a physician's credentials or to evaluate properly his qualifications some of the boards, especially in the large cities, have appointed committees of surgeons to witness personally major operative procedures in an effort to determine the technical ability of an applicant. All of these procedures are within the rights and scope of the Workmen's Compensation Committees. Under the law it is the responsibility of the medical society to protect the interests of the injured workmen by maintaining high standards and assuring competent medical care. It has been the aim of the Committee to simplify as much as possible the symbols or ratings granted to physicians. Under the Workmen's Compensation Law a general practitioner may function as he does in general practice with the exception that he is required and must agree to limit his professional activities to such medical care as his experience and training qualify him to render. It is, of course, the function of the medical society, as stated above, to specify the character of the medical care that the applicant physician is qualified and authorized to render. The standards set up by the medical society are such as to enable a general practitioner to render minor surgical care and such other medical care as is customarily rendered by a practitioner in accordance with the type of practice prevailing in the community in which the physician practices. For the best interests of the profession, as well

as of the injured workmen, it has been decreed that a general practitioner shall not perform major surgical procedures or give specialistic treatment unless he has been authorized to do so by the compensation committee of his county medical society.

It has been necessary, particularly in rural communities to enlarge the scope of certain practitioners who, although possessing special qualifications over and above those possessed by the average physician in the community, do not fully limit their practice to the field in which they are specially qualified. There are many reasons why well-qualified physicians do not limit their practice to a specialty in such communities. Where such physicians are designated as especially qualified in accordance with the standards set up by the county society and where such physicians are customarily looked upon as consultants in these areas, they may so serve under the Workmen's Compensation Law. It would be desirable, of course, so to order and arrange practice that these well-qualified men could devote themselves exclusively to their specialties, but for many reasons this is impossible at the present time.

The Committee recommends that as far as possible general practitioners be limited to the symbol "X," being granted other symbols only where in the opinion of the county medical society board they possess definite special qualifications in accordance with the accepted standards. The question has arisen as to whether or not a physician may, either as a practitioner or as a specialist, be granted more than one symbol indicating special qualifications in more than one field of practice. Your Committee has always held that special circumstances warrant the granting of multiple symbols if the specialties are closely related. While in the large cities a specialist, for example, may confine himself to the practice of ophthalmology in most of the smaller communities this specialty is combined with the related fields of otology and laryngology, so too, with surgery and orthopedic surgery or gynecology. In some communities general surgeons are in charge of orthopedics and even gynecology or urology in accredited hospitals, while in the larger cities specialism is often strictly limited to one particular branch of medicine.

Without going into too great detail it may be said that where specialties are closely related and where the physician is known to be or can give proof that he is qualified in closely related specialties, he may receive the proper multiple designations. On the other hand, where specialties are not related, special multiple symbols should not be given. It is generally conceded that a physician should not be granted numerous specialty ratings indicating generally a lack of expertness in any one specialty.

Your Director has generally held that where a physician in a rural community acts as a consultant and is so recognized by the compensation committee of his local county medical society and where he performs the specialistic service under the Workmen's Compensation Law, he should receive a specialist fee for all special services performed by him. The question has frequently arisen whether a specialist who treats a condition not falling within his specialty should be paid in accordance with the fees

allotted to specialists. It has been generally held that where a specialist treats a condition, even though a minor one that properly falls within his specialty, he should be paid a specialist's fee, but, if the condition treated does not properly fall within the specialty or require specialistic treatment, he should be paid only a practitioner's fee. It is generally accepted in large communities, where an adequate number of specialists is available, that consultations and referred cases shall be seen only by properly designated specialists.

There has been ample experience during the last five years to warrant a strict interpretation of this rule requiring physicians to refer cases requiring specialistic care only to physicians with an "S" rating. Many of the questions arising under the Workmen's Compensation Law both as to treatment and the question of causal relationship require the attention and judgment of a physician of ample experience. The standards are so designed as to exclude a physician of inadequate education, training, and experience from becoming designated as a specialist in any given field of practice. This is in the interest of proper medical care, the safeguarding of claimant's rights to compensation, and the protection of the medical profession.

The importance of properly qualifying physicians, and in particular specialists, under the Workmen's Compensation Law becomes more evident when one considers the question of medical testimony in Workmen's Compensation cases.

The medical profession has been accused of extending the scope of compensation because of false, prejudiced, or ignorant opinions before Workmen's Compensation Board or the courts. It is stated that medical testimony is often unreliable because of the medical witness himself. If this be true then it is the responsibility of our qualifying committees to demand a high standard for physicians desiring to be qualified under our State Workmen's Compensation Law. Both professional and ethical standards must be sufficiently high to approximate the ideal, i.e., a physician thoroughly familiar with industrial injuries and occupational disease by reason of education and practical experience. The honest, conscientious physician will not hesitate to express a doubt if his own knowledge and experience do not warrant a positive statement. Neither selection by the employee or the employer should condition the doctor's mind in regard to the all-important question of causal relationship. Ignorance is less damaging than expert knowledge when the latter is prostituted by financial considerations as a result of the physician's employment by one or other party. Unquestionably the medical profession of this state is now charged with the responsibility of providing the highest type of medical care for injured workers. In addition there is the added responsibility of guarding the granting of specialists' ratings to those who when called upon, either by employee or the employer or insurance carrier, to testify before the hearing boards, do so with a background of sound knowledge and ample experience as well as an appreciation of the ethical and moral importance of their testimony.

*Podiatrists and Optometrists*—Under date of June 5 1939, a memorandum was received from the Compensation Medical Registrar in regard to the question

"Whether the Industrial Board of the Department of Labor would honor and recognize the services rendered by a podiatrist, chiroprapist, optometrist etc., to an injured employee in a workmen's compensation case within the scope of such person's specialized training and qualifications" \*

Your Director under date of June 17 wrote an opinion averring that the amended Workmen's Compensation Law specifically excluded from the rendering of medical care all persons but licensed physicians who have been qualified by their medical societies and licensed by the Industrial Commissioner. The only exceptions provided in the law come under Section 13-b(1) (c) \*

Under date of October 19, 1939, your Director was informed that the Industrial Board had revised its opinion and the following resolution was adopted—

'Resolved, that the Industrial Board is of the opinion that only a physician authorized under the provisions of Section 13-b of the Workmen's Compensation Law may render medical treatment to a claimant in a compensation case and that a podiatrist, chiroprapist, optometrist, or any person not in the category of such authorized physician who treats a claimant in a compensation case cannot under the Workmen's Compensation Law enforce the payment of a bill for services rendered to a claimant, and the testimony of such unauthorized person would only be competent in regard to services actually rendered by him under the active and personal supervision of an authorized physician' \*

*X-Rays*—For some time insurance carriers have been pressing for a revision of the fee schedule for x-ray examination. The carriers in many instances were attempting to apply Rule 12 of the Fee Schedule which refers to multiple surgical injuries and to x-ray examinations. Your Director protested to the carriers when instances of deduction on multiple x-ray examinations were brought to his attention and finally obtained a ruling from the Industrial Council which indicates that Rule 12 does not apply to x-ray or pathologic examinations. This revision of the rule will appear in a revised edition of the Fee Schedule which will shortly appear in print.\*

A tentative proposal was made as the result of a meeting between the representatives of the State Medical Society and of the Insurance Carriers Organization, at which time roentgenologists representing both the Medical Society and the insurance carriers were present. This suggests a compromise on the following basis:

The insurance carriers' representatives made two proposals on May 1, 1939

- I For contiguous, comparative (specifically authorized) and remote parts
  - (a) For two parts the fee shall be the greater fee for any part plus one-half of the fee for the lesser
  - (b) For three or more parts the fee shall be the greatest fee for any part plus two-thirds of the fees for the remaining parts

- II 1 For two contiguous parts the fee shall be the greater fee plus 50 per cent of the remaining fee.
- 2 For two remote parts the fee shall be the greater fee plus 70 per cent of the remaining fee
- 3 For three or more parts, whether contiguous or remote, the fee shall be the greatest fee plus 70 per cent of the total of the remaining fees

The second proposal met with a certain amount of favor as evidenced by the reports received from the various county societies that answered our request for information. In view of the fact, however, that the insurance carriers desired to have this multiple fee applied to all categories of physicians making x-ray examinations and would not permit a removal of the 5 per cent discount clause for the payment of x-ray bills within thirty days, the negotiations ended abruptly. It was felt that the fees now paid to general practitioners and specialists other than roentgenologists are already so low that a reduction would represent a loss on the part of these practitioners. Furthermore, it was felt that, if a discount were given for multiple x-ray examinations, the saving to the insurance carriers would be considerable and they on their part should agree to remove the 5 per cent discount allowed for payment within thirty days, just as they have already agreed with the hospitals not to deduct this 5 per cent discount from bills for x-ray services rendered by salaried roentgenologists in hospitals.\*

*Ex-Medical Policies*—For a number of years there has been a growing suspicion that the basic right of the injured employee to choose his own doctor to treat him for injury or illness sustained under the provisions of the Workmen's Compensation Law has been, to a large degree, nullified by the type of insurance carried by the employer. Under the terms of the so-called ex-medical policies, the employer is covered only for the cost of compensation for time lost and disability while the employer undertakes to provide medical care either through the creation of an employer's medical bureau or by employing a physician to provide medical care.

Certain hospitals have found it convenient and economical to insure themselves under this type of policy, depending upon their unpaid or salaried medical staffs to render medical care usually without extra compensation. In the case of employers who have this type of policy, there is unquestionably a certain amount of pressure brought to bear on the injured employee to utilize the services of physicians provided by the employer. In many instances employees are actually afraid, because of the fear of losing their positions or jobs, to select their own physician. In a few instances where the employer may not have intended to dismiss the employee if he had selected his own doctor, the fact that the majority of the employees were treated by a doctor of the employer's choice gave some employees the impression that if they did exercise their right to free choice they might lose their positions.

Furthermore, certain groups of employers within a given industry utilize the services of so-called "service organizations" or business agents to arrange for medical care and carry out the details of supervising medical care and paying the

as of the injured workmen, it has been decreed that a general practitioner shall not perform major surgical procedures or give specialistic treatment unless he has been authorized to do so by the compensation committee of his county medical society.

It has been necessary, particularly in rural communities to enlarge the scope of certain practitioners who, although possessing special qualifications over and above those possessed by the average physician in the community, do not fully limit their practice to the field in which they are specially qualified. There are many reasons why well-qualified physicians do not limit their practice to a specialty in such communities. Where such physicians are designated as especially qualified in accordance with the standards set up by the county society and where such physicians are customarily looked upon as consultants in these areas, they may so serve under the Workmen's Compensation Law. It would be desirable, of course, so to order and arrange practice that these well-qualified men could devote themselves exclusively to their specialties, but for many reasons this is impossible at the present time.

The Committee recommends that as far as possible general practitioners be limited to the symbol "X," being granted other symbols only where in the opinion of the county medical society board they possess definite special qualifications in accordance with the accepted standards. The question has arisen as to whether or not a physician may, either as a practitioner or as a specialist, be granted more than one symbol indicating special qualifications in more than one field of practice. Your Committee has always held that special circumstances warrant the granting of multiple symbols if the specialties are closely related. While in the large cities a specialist, for example, may confine himself to the practice of ophthalmology, in most of the smaller communities this specialty is combined with the related fields of otology and laryngology, so too, with surgery and orthopedic surgery or gynecology. In some communities general surgeons are in charge of orthopedics and even gynecology or urology in accredited hospitals, while in the larger cities specialization is often strictly limited to one particular branch of medicine.

Without going into too great detail, it may be said that where specialties are closely related and where the physician is known to be or can give proof that he is qualified in closely related specialties, he may receive the proper multiple designations. On the other hand where specialties are not related, special multiple symbols should not be given. It is generally conceded that a physician should not be granted numerous specialty ratings indicating generally a lack of expertness in any one specialty.

Your Director has generally held that where a physician in a rural community acts as a consultant and is so recognized by the compensation committee of his local county medical society and where he performs the specialistic service under the Workmen's Compensation Law, he should receive a specialist fee for all special services performed by him. The question has frequently arisen whether a specialist who treats a condition not falling within his specialty should be paid in accordance with the fees

allotted to specialists. It has been generally held that where a specialist treats a condition even though a minor one that properly falls within his specialty, he should be paid a specialist's fee, but, if the condition treated does not properly fall within the specialty or require specialistic treatment, he should be paid only a practitioner's fee. It is generally accepted in large communities, where an adequate number of specialists is available, that consultations and referred cases shall be seen only by properly designated specialists.

There has been ample experience during the last five years to warrant a strict interpretation of this rule requiring physicians to refer cases requiring specialistic care only to physicians with an "S" rating. Many of the questions arising under the Workmen's Compensation Law both as to treatment and the question of causal relationship require the attention and judgment of a physician of ample experience. The standards are so designed as to exclude a physician of inadequate education, training, and experience from becoming designated as a specialist in any given field of practice. This is in the interest of proper medical care, the safeguarding of claimant's rights to compensation, and the protection of the medical profession.

The importance of properly qualifying physicians, and in particular specialists, under the Workmen's Compensation Law becomes more evident when one considers the question of medical testimony in Workmen's Compensation cases.

The medical profession has been accused of extending the scope of compensation because of false, prejudiced, or ignorant opinions before the Workmen's Compensation Board or the courts.<sup>1</sup> It is stated that medical testimony is often unreliable because of the medical witness himself. If this be true then it is the responsibility of our qualifying committees to demand a high standard for physicians desiring to be qualified under our State Workmen's Compensation Law. Both professional and ethical standards must be sufficiently high to approximate the ideal, i.e., a physician thoroughly familiar with industrial injuries and occupational disease by reason of education and practical experience. The honest, conscientious physician will not hesitate to express a doubt if his own knowledge and experience do not warrant a positive statement. Neither selection by the employee or the employer should condition the doctor's mind in regard to the all-important question of causal relationship. Ignorance is less damaging than expert knowledge when the latter is prostituted by financial considerations as a result of the physician's employment by one or other party. Unquestionably the medical profession of this state is now charged with the responsibility of providing the highest type of medical care for injured workers. In addition there is the added responsibility of guarding the granting of specialists' ratings to those who when called upon either by employee or the employer or insurance carrier, to testify before the hearing boards do so with a background of sound knowledge and ample experience as well as an appreciation of the ethical and moral importance of their testimony.

<sup>1</sup> E. Ransom Koontz. J. A. M. A. 114: 563 (Feb. 17) 1940.

committees, or at compensation meetings held by the various county medical societies throughout the state to discuss either with members of the committee or with membership of the society questions of interest affecting the Workmen's Compensation Law. During the past year he has visited once or more often thirteen cities throughout the state.

It would be desirable to knit together more closely the sixty-four county society compensation boards with the Compensation Bureau of the State Society as a pivotal point. It is apparent that the smaller county societies are not in a position to provide additional personnel to carry out the main provisions of the Workmen's Compensation Law. However, both the committees and the doctors in these counties occasionally find themselves perplexed when confronted with unusual circumstances, and a closer organic connection with the State Society Bureau would be beneficial to the membership generally. The Bureau is prepared to assist in the collection of bills and the straightening out of disputes and difficulties that arise from time to time with either the Department of Labor, the insurance carriers, self-insurers, or other interested parties.

In the qualification of physicians the Bureau is prepared not only to assist in the carrying out of the provisions of the law, but also in representing the county societies in the event that an appeal by a physician is made to the Industrial Council against the action taken by a county society board. Questions involving interpretation of the fee schedule frequently arise that may require the help of the Bureau. Generally speaking, the Department of Labor the numerous insurance carriers, and the self-insurers prefer to deal with the Bureau in questions involving the interpretation of the law of the rules and regulations governing the law as adopted by the Department of Labor, and of the Fee Schedule. It is hoped that through closer cooperation between the various county society committees and our Bureau of Compensation there may be a more uniform carrying out of the provisions of the law to the end that administration of the law will be facilitated. It would be desirable if in addition to the annual conference of compensation committee chairmen which is usually held at the time of the Annual Meeting at least one other general meeting might be held for a discussion of problems of mutual interest. This might be arranged at the time of the annual meeting of the secretaries or of the legislative chairmen in Albany. It is the purpose of the Compensation Bureau of the Medical Society of the State of New York to lessen the burden of the local county medical society so far as workmen's compensation is concerned as well as to integrate the work of these groups scattered throughout the state to the end that the Workmen's Compensation Law may function as smoothly as possible.\*

The chief reasons for inclusion of physical therapy in the above statute was to put a curb on a procedure that at the time the law was amended was rapidly falling into disrepute because of its promiscuous and protracted use. It was generally felt in the profession at that time that something should be done to control the use of physical therapy, especially because under the free-choice principle the carrier or

employer was no longer able to select the doctor and control his activities. There is no question, however, that in qualified hands physical therapy is now recognized as a useful form of medical treatment in many types of industrial injury, not only in restoring the patient to his occupation more quickly than if proper modalities were not utilized but also in abolishing pain and making the injured patient more comfortable. On the other hand, there is no question that physical therapy treatment is occasionally rendered for longer periods of time than indicated. Therefore authorization when the physician has reached the \$25 limit gives an opportunity to the employer or carrier to have a medical examination made of the case and determine for himself the need and advisability of continuing treatment. For a long time physicians throughout the state have been urged to cooperate in requesting authorization, not only to cover the medical aspects above discussed but also to protect the physician who employs continued physical therapy treatments legitimately and in the light of proper indications. It has been attempted to convince insurance carriers that there are in this state a considerable number of qualified experts in physical therapy whose services could be utilized in a consultative manner in difficult or protracted cases, not only to point out the indications for treatment but to determine the best form of physical therapy to be given and also to carry out treatment in difficult and unusual cases. So far these efforts have met with little success.\*

*Five Per Cent Deductions*—The Industrial Commissioner has not as yet seen fit to remove the 5 per cent amount allowed on medical bills of \$15 or over or to put a penalty on employers or carriers who fail to pay their bills within a reasonable period of time. Repeated protests have been voiced against the 5 per cent deduction, especially in the absence of a penalty for failure to pay on time. We do so again. We need not reiterate our reasons for the protest at this time. There is no provision under the present law for forcing an employer or insurance carrier to pay a bill, even though not protested within thirty days. The only recourse a physician has for the payment of the bill not protested and not paid is civil action. Fortunately most insurance carriers pay bills promptly.

In the case of the self-insurer, it has been necessary during the course of the year to bring to the attention of the Industrial Commissioner instances where large self-insurers are extremely dilatory in the payment of bills. Under the law an employer is given the privilege of self-insurance if he can submit evidence of financial responsibility. Failure to pay bills is one evidence of irresponsibility and cognizance of this should be taken by the Department of Labor. Physicians are urged to bring instances of failure of self-insurers to pay their bills promptly to the attention of this Bureau.

*Proration of Medical Bills and Concurrent Fees*—Under the rules and regulations promulgated by the Industrial Council governing the Fee Schedule Rule 11 refers to concurrent fees and states that concurrent fees with two or more physicians for an identical period of care and treatment will not be allowed except when warranted by complication or noted need for assistance, when all the required care and



doctor's bills. In other instances physicians or laymen contract to render medical service on a flat fee or percentage of pay roll basis. Numerous complaints have been received that these organizations are actually directing injured employees to preferred doctors, thereby nullifying the patient's right of free choice. When the medical provisions of the Workmen's Compensation Law were amended in 1935 it was felt that the free-choice provision would not only enable the injured workman to get better medical care through the free choice of his own physician and the bringing into the fold of numerous well-qualified doctors and specialists but would do away with the pernicious practice of having medical testimony in the hands of a physician in the employ of or obligated to the employer or insurance carrier.

If the ex-medical policy is, as seems to be the growing belief, nullifying these salutary provisions of the law, it is time that an inquiry be made into the whole question of ex-medical coverage with a view of determining whether indeed such coverage nullifies the patient's statutory rights of free choice. Certainly the conditions under which ex-medical policies are given should be gone into fully, since it is the belief of many that these policies are issued promiscuously without due consideration of the financial responsibilities of the employer and his bona fides in obtaining such coverage. Many physicians complain that it is only with great difficulty that they are able to collect bills for medical services rendered to the holders of this type of policy. Investigation should also be made of the many manufacturers agencies service groups, etc., that serve as intermediaries between insurance carriers, employers, and physicians and that in effect have the same deleterious effects upon the free-choice principle.

Recently complaints have come from physicians to the effect that certain union representatives have been intervening to direct injured workmen, members of certain unions, from physicians of their own choice to physicians selected by or in the good graces of such union representative. While there has been no opportunity of verifying these complaints, the Committee is of opinion that this practice should be investigated with a view of determining whether or not it is interfering with the rights of the injured employee to select his own doctor.

**Employers' Medical Bureaus**—Under the provisions of the Workmen's Compensation Law an employer may obtain a license to establish a medical bureau if the frequency of accidents in the plant or the hazards of employment warrant the establishment of such medical bureau. A medical bureau license permits an employer to provide continued medical care to injured employees after the emergency treatment. It is not the purpose of the law to permit the establishment of medical bureaus to enable an employer to practice medicine by the engagement of a licensed physician on a salary basis. The medical bureau shall, and must, serve a useful purpose in giving prompt medical care where such care is not ordinarily promptly available in the vicinity of the plant. It is obviously necessary where plants are established in outlying or isolated areas and where physicians and hospitals are not readily available. The employers' medical bureaus should not serve the selfish interests of

an employer alone and enable him thereby to subvert the free-choice principle of the law. While the employer's medical bureau may not deny an injured workman free choice of physician, unless the licensing of such bureau is properly supervised and controlled, in effect it serves as a means of permitting an employer to practice medicine.\*

The whole question of employers' medical bureaus needs further consideration and investigation as the result of our experience during the past five years. As no such bureau can be licensed without the approval of the county society compensation board, the county society committee should inquire very carefully into the necessity for the bureau license, and if a license is issued, should arrange to inspect the bureau from time to time to determine the needs for its continued existence, as well as the way in which the rules and regulations governing such bureaus are being carried out. Furthermore, any complaints received from physicians in the community that patients are being deprived of their right of free choice should be promptly reported to this Bureau for investigation.

**First-Aid Bureaus**—The Workmen's Compensation Law makes no provision for the operation of first-aid stations or bureaus by employers. It is generally agreed that an employer may establish a first-aid station to give emergency attention to injured workers. If continued medical care is required, however, a medical bureau license is necessary. At the present time there is no supervision over first-aid stations. So far as is known there are no rules and regulations governing either the equipment or personnel of first-aid stations. In some instances laymen are in charge of these first-aid stations either with or without medical supervision or the assistance of trained nursing personnel. Apparently there has been no attempt on the part of any public agencies to regulate first-aid stations. If only for the purpose of seeing that medical care is properly provided by trained and licensed personnel and determining whether these bureaus are not providing medical care beyond the initial emergency treatment, provision should be made to license all first aid stations.

**Self-Insurers**—Under Section 50 of the law the Industrial Commissioner may, if an employer furnishes satisfactory proof of his financial reliability, permit him to cover his own risk.\*

From time to time complaints have been received alleging failure on the part of self-insurers to pay bills for medical services. In some instances it has been necessary to resort to the civil courts to effect payment. Often self-insurers fail to object to medical bills and then ignore them. They seldom resort to arbitration. Occasionally they are arbitrary and uncooperative, ignoring friendly approaches to adjust or settle matters in dispute. It is unfortunate that the same degree of cooperation existing between the medical profession and the insurance carriers cannot be established with certain self-insurers. Instances of failure of self-insurers to comply with the law or to pay medical bills promptly should be sent to the Bureau.

**County Society Compensation Committees**—During the year your Director has appeared by invitation before the workmen's compensation

- 4 Ex-medical policies
- 5 Self-insurers and nonpayment of medical bills
- 6 Industrial dermatoses
- 7 Interposition of "service organizations" between physician and insurance carrier
- 8 Suitable progress report.
- 9 Provision to enforce payment of medical bills without court action

## Part IV

### Legislation

The Council Committee on Legislation consists of

John L. Bauer, M D, <i>Chairman</i>	Brooklyn
Walter W. Mott, M D	White Plains
Leo F. Simpson, M D	Rochester

It has submitted the following preliminary report to be followed by a supplementary report to be prepared just before your meeting

Early in the fall, the Committee on Legislation held a meeting to organize and to outline a program of activities. The agenda was carefully prepared by Dr. Joseph S. Lawrence, the executive officer. He emphasized the need of securing promptly the names of the chairmen and other members of the legislative committees of the various county societies. His first approach was through the presidents of the county societies and about 50 per cent of the presidents graciously and promptly responded. In some instances three or four requests were sent. The list was not completed until after the opening of the legislative session in January. Dr. Lawrence was persistent. He wrote to the chairmen of the preceding year when no response was received from the presidents.

Probably no committee of the county society is charged with more important duties than the Legislative Committee. Legislation may and often does concern the physician very vitally. It would seem that a wise and early choice of those who will serve faithfully and a prompt notification to our Executive Officer as to the personnel of the committee, should be of primary importance. At the time of this writing I am informed that thirty-two chairmen have not responded in any way to the six bulletins and forty-nine bills which have been sent to them. It is true eleven of these thirty-two chairmen did attend the conference of the county chairmen.

Nine of the thirty-two counties have been heard from, not through the chairmen, but through other members of the committees.

Fourteen of the sixty-one county societies have not responded in any way. They have probably discussed the bills with their legislators but we should be happy to learn of their actions and support.

Our Executive Officer has issued from Albany ten bulletins so far [March 18, 1940] with a short description of the bills in which we are interested—and just as soon as humanly possible after their introduction in the legislature—and also in regard to several bills before Congress. These bulletins have gone to the members of every county society legislative committee, to the chairmen of the legislative committees of the woman's auxiliaries to the Council, to many

other doctors, and to some prominent lay people who are interested in our legislative program making a total of 450 names on our mailing list.

An innovation has been a blank sheet accompanying the bulletin, with the numbers of the bills and space for comments, so that we could use the sheets in checking up on the reactions of the committee men to the bills and their instructions. The receivers are also kept informed as to the action on the bills by the legislature.

The *White Book*, a publication prepared by the legislature each year and giving a list of the legislators, their committee assignments, and the officers of the legislature, has been furnished to each chairman.

The annual conference of the county society legislative chairmen was held in Albany on February 7. Thirty county societies and six woman's auxiliaries were represented. This conference considered carefully each bill already reported through the bulletins and definite action on each bill was taken by vote.

It is always very educational to learn of the different points of view of the members of the conference. Discussion of the merits of the bills was occasionally animated. The chairmen, who were unable to be present, missed a very instructive session.

So far this year, the list of bills has not been quite so large as in other years. Highly controversial legislation is not acceptable—a short session is desired.

The Mahoney-Mailler bill which adds a year of internship to the medical course was prepared and introduced at the suggestion of the State Society, on the instruction of the last House of Delegates.

The Desmond Radiology bill which we have pledged ourselves to support has been amended. The radiologists want us to back it in its amended form and we shall.

Another bill introduced at the suggestion of the Department of Education revises the manner in which licenses to practice medicine presented by physicians from other states or countries shall receive endorsement. This has just been endorsed by the Board of Regents.

The optical dispensing bill has been reintroduced. Again, Mr. Peterson has introduced the chiropractic bill and there are also other bills which we have vigorously opposed in preceding years.

We are receiving support and cooperation from the officers and Council, some of whom have attended our meetings. However, 25 per cent of the Council members have to date failed to reply with any comment or suggestion.

Our president, Dr. Terry M. Townsend, has proved of great assistance and has attended the meetings. Dr. Peter Irving and Mr. Dwight Anderson have given loyal support. Dr. Joseph S. Lawrence supplies the ignition and fuel—and credit even for this report is due him. We ask the hearty cooperation of every county society.

Our Executive Officer writes that twenty-one county societies whose chairmen have neither attended the conference nor responded to any of our communications are represented by twenty-six assemblymen, and the fourteen county societies from which we have had no response, either from members of the committee

treatment reasonably falls within the range of qualifications of one physician, no other shall claim a fee. Only one physician shall be in charge of the case. The fees for assistance and consultations must be justified. Instances have been brought to our attention during the past year of surgeons operating on patients and referring the patient back to the referring physician before the expiration of the period of treatment, mentioned in the Fee Schedule, that the surgeon or operator was required to provide. In such instances the surgeon rendered a fee below the fee mentioned in the Fee Schedule and the practitioner rendered a bill for the balance. This is a practice that cannot be condoned and has met with the disapproval of the Medical Society and the Department of Labor. In most instances it is a thinly disguised method of rebating or fee splitting.

There may be unusual circumstances that would warrant a surgeon turning back a case to the family physician for continued medical care within the scheduled period of time if the latter were qualified to continue the treatment of the case. For example, in a rural community an operation for hernia may be performed by a surgeon in a hospital in a town distant from the patient's home. It would obviously be both unreasonable and uneconomic either to keep the patient in the hospital for the whole scheduled period of eight weeks or to have him return for repeated examinations to the surgeon living at a distant point. In such instances it would be legitimate and ethical for the operating surgeon to refer the patient back to the attending physician or to any qualified surgeon for observation as long as necessary. These conditions do not exist in the metropolitan area or in other large cities throughout the state, unless the patient by chance is referred to a surgeon or specialist in a large community and returned to his home at a distant point. It is therefore suggested to the county medical societies that in all cases of this type, where a surgeon finds it necessary to refer a patient back to either the family physician or to another surgeon, that each submit for the approval of the county society a bill covering the service rendered, the total of the bills to be represented by the fee in the schedule for the period outlined unless a fee in excess of the minimum is agreed upon in advance. It should be borne in mind that under the Workmen's Compensation Law a qualified physician who undertakes the treatment of a case is expected, unless complications arise, to give all the necessary treatment during the period of care required under the schedule. This does not imply that if complications arise a consultant may not be called in and paid in accordance with the Fee Schedule for the service rendered by him. Nor is the amount paid to the consultant for the complicating condition to be deducted from the fee payable to the attending physician. The question has often arisen as to the proration of a bill of a surgeon who in an ordinary case transfers the patient to, let us say, a physical therapist for physical therapy within the scheduled period of time. It has generally been ruled that the surgeon shall give all the required treatment for the restoration of the patient to full functioning within the scheduled period. If there be need for special physical therapy at the hands of any practitioner, authorization for this as an additional fee

should be obtained from the employer or carrier. It can often be shown that expert physical therapy, even in an ordinary case, will some times restore a patient to full functioning more quickly than if the patient received the care of the attending physician or surgeon alone. Authorization for such additional treatment should be obtained in view of the fact that in most instances the fee will be in excess of \$25.

*Settlement of Bills*—The Bureau has received in the course of the past year numerous requests from physicians throughout the state, usually on the recommendation of their county medical society officers or members of their workmen's compensation committees, for the help of the Bureau in settling disputes over bills. It is extremely important to the best interests of the medical profession that this Bureau should lend its best help in adjusting disputes over bills. Arbitration sessions in the outlying parts of the state are not held frequently. In almost every instance your Director has been able to bring about payment of the doctor's bill in full, or to effect a satisfactory settlement without arbitration.\*

The State Society Bureau serves as the focal contact point of the medical profession for all groups and agencies, governmental and private, and other interested parties. Certain duties and responsibilities are placed upon the medical profession by the statutory provisions of the amended Workmen's Compensation Law. The Workmen's Compensation Bureau serves to assist in carrying these out either directly or through the local workmen's compensation committees of the sixty-four individual county societies. The degree of success with which the amended law has been carried out by so large a group of individual committees can in a large measure be attributed to the State Society Bureau which has served to coordinate and harmonize the action of these numerous groups according to a uniform pattern so far as is possible.

Needless to say your Bureau and your Committee have during the past year been consulted on numerous occasions by representatives of insurance carriers' organizations and individual insurance carriers, by employers, by other professional organizations, and by attorneys desiring to obtain the cooperation or help of the medical profession in matters pertaining to the Workmen's Compensation Law. This help has been given freely in all instances. It is hoped that during the coming year it may be possible to establish closer relationships with labor union representatives and with self insurers perhaps through the establishment in the latter instance of a cooperative organization of self-insurers.

#### *Matters Under Consideration and Study at This Time*

- 1 Investigation and study of medical bureaus along route of Delaware Aqueduct
- 2 Revised edition of the Fee Schedule
- 3 Payment of physicians' bills in no lost time cases, or where claimant is not entitled to compensation indemnity but where no file of case is made up by Department of Labor, or where case is controverted and claimant fails to appear at hearing

talks made by Dr Townsend before the Congress of Physical Therapists, National Gastroenterological Association, Daughters of the American Revolution, New York City, Drug, Chemical and Allied Trades Section of the New York Board of Trade, Skytop, Pa., the Railroad Y.M.C.A. at Albany, and special appearances which he made on programs of the following county medical societies Bronx, Erie, Kings, Monroe, and Queens, New York, and Essex County Medical Society, New Jersey

The press was informed of the postgraduate courses conducted by the Council Committee on Public Health and Education in Delaware, Schoharie, Montgomery, and Monroe counties, and the Institute on Diet and Nutrition at Syracuse. Four general releases were issued including an announcement by Dr Irving relating to medical indemnity insurance, and other releases containing excerpts from editorials appearing in the *New York State Journal of Medicine*

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## Part V

### Malpractice Group Plan Insurance

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Clarence G Bandler, M D,	
Chairman	New York
Murray M Gardner, M D	Watertown
Andrew Sloan, M D	Utica
Peter Irving, M D, <i>ex-officio</i>	New York
George W Kosmak, M D,	
<i>ex-officio</i>	New York

A preliminary forecast of the cost of operating the Group Malpractice Insurance Plan for the four years ending December 31, 1939 was obtained and studied. Some increase in the cost of suits and claims disposed of occurred, but there is no indication that any changes in rates will be necessary. The final tabulation of costs cannot be completed until early in March, but the estimates were carefully drawn off and there is no reason to believe that the final figures will differ very much from the forecast.

The Committee is more than ever convinced that the new accounting system which was put into effect on January 1, 1936, is a long step forward in the efficient operation of the Group Plan. It is so complete in carded and indexed details that it is now possible to study the loss experience in any classification, geographic or medical. As a result the Committee can report that the State Medical Society now has the most complete tabulation of malpractice loss cost that has ever been compiled. Predicated upon this data, rates can be promulgated more accurately than ever before. The importance of this fact is apparent when it is remembered that the Group Plan is operated at cost plus a small fixed profit guaranteed to the carrier. Thus the Society is now assured that its rates will include no loading to provide profits beyond the reserves required by law and the agreed carrying charge.

The Committee feels that it cannot over-emphasize the importance of constructive co-operation of all members. Unwarranted or thoughtless criticism of the work of other members must be avoided. The fullest cooperation and assistance should be given wholeheartedly to members in our separate communities wrongfully accused of malpractice and to the legal counsel upon whom rests the burden of their defense. Solidly united action to meet the attacks of unjust claimants in every locality is the only method by which unscrupulous claims can be discouraged. Although very few suits are won by plaintiffs it must be kept in mind that it frequently costs as much or more to win actions against members than it would have cost to compromise and settle them in the beginning. But it is only by defending and winning unjust malpractice actions that the good reputation and

or from any person, are represented by fifteen assemblymen.

Lastly, there is seemingly some indifference on the part of many county chairmen. This is a serious matter, and should receive careful consideration from the delegates. Realizing that the labors of the Legislative Committee, more than any other activity of the Society, affect intimately every member of this Society, whether he be general practitioner or specialist, it behooves all of us to support loyally and generously this work.

The Executive Officer today receives the same allowance to carry on the work as he did ten years ago. Let us increase his funds proportionately to the enlarged scope.

## Publications

It is now possible to report on the experience, literary and financial of the calendar year 1939 in production of the *New York State Journal of Medicine* from the New York office. On the *Directory*, the report can cover at the time of writing, March 18, 1940, only on the editorial aspects other than the costs. The financial features will certainly be available at the time of your meeting and probably before May 6.

**JOURNAL**—Apparently the members like the *JOURNAL* in its new dress since the flow of original articles has steadily increased. In 1939 there were published 246 scientific articles—a total of 1443 pages.

Every effort has been made to keep the individual articles down to a length which will retain the interest of the reader. The Editorial Committee has expressed itself as favoring an outside limit of ten pages of the *JOURNAL* in its present typographical format for these articles.

Many tables are thought undesirable and the committee urges authors to put these as much as possible in words. A table thrown on a screen as an aid to the reading of a paper makes the spoken word more vivid and graphic, but in the printed page it falls short of this purpose, the committee holds.

Illustrations, on the contrary, are very valuable, though they constitute a real financial problem. The practice of asking the author to accept the surplus over a basic figure of fifteen dollars has been followed. This allows for four or five cuts depending on their size and need for retouching.

Financially, the final figures show an expenditure which is, as expected, considerably higher than in the five years preceding—but definitely lower than it was feared. The total was \$24,542.18, or \$1.47 per member (using the average figure for membership—16,594).

It has been possible to work out savings by several different ways, some of which were applied in 1939, but others began with 1940. These will bring the cost in 1940 down quite materially below the above figures assuming that the income remains the same. Those in charge look forward to a gradual increase on that side of the books. The opinion has been expressed in several quarters, both inside the Society and in the publishing and advertising world, that the *New York State Journal of Medicine*, which is second only in circulation as a general medical journal to the *Journal of the American Medical Association*, might even be expected to support

itself in time. Whether this is a sound forecast or not, the Council is bending every effort toward that goal.

**DIRECTORY**—The delay of two years imposed twice as heavy a task of compilation, and for that reason appearance of the 1939-1940 edition was delayed beyond the first of the year—the goal that had been set. Many more changes in details listed under physicians' names had to be made.

The cost remains to be reported, though it can be said now (March 18, 1940) that the advertising totals are much above those of the years preceding 1935.

The format has been changed in several ways that were thought desirable. The type was chosen with a view to quick readability. It was found possible to omit punctuation between abbreviations without confusion, but with space saving. In addition to the Table of Contents a page entitled "How To Use" is included, and a fuller "Glossary" of abbreviations. An alphabetic index of hospitals appears in front. Where possible, the hospital staffs follow the larger cities immediately—and in more readable type and format. An abstract of pharmaceuticals approved by the Council on Pharmacy and Chemistry of the American Medical Association was drawn up from the book *New and Non-Official Remedies*. Thus, it is hoped, will be of use for reference to physicians. Last, but not least, the towns in the state appear—for the first time—in strict alphabetic order.

The Council has carefully considered the two instructions of the 1939 House that the *Directory* be published every two years with a supplement in between. It has heard comment that a supplement is undesirable for two reasons. First, it would make necessary a look in both the *Directory* and the supplement in order to make certain that the data about any physician is up to date and correct. Also the supplement, expensive to compile and print, could have no income from advertisements.

The Council has formed no opinion on the merits of publishing a full *Directory* every year as compared to every second year. Arguments have been advanced for each, but it is necessary to have in mind particularly the final total net cost of the present edition.

## Medical Publicity

This year has witnessed increased activity of the Public Relations Bureau due to agitation for the passage of the Wagner National Health Bill and pressure for other collectivist legislation to extend the control of government into the practice of medicine.

The president of the Society, Dr. Terry M. Townsend, took occasion, at district branch meetings, to emphasize the need for resisting this tendency. Releases to the daily press were dispatched concerning his remarks at each of these meetings. In addition 425 weekly newspapers of the state were provided with a column of ready-to-print plate matter concerning these meetings.

Press clippings show an increased use of our material by newspapers in the state. Some of the material has been telegraphed by press services throughout the nation as responses in correspondence from many parts of the country indicate. Releases were sent the press concerning

talks made by Dr Townsend before the Congress of Physical Therapists, National Gastroenterological Association, Daughters of the American Revolution, New York City, Drug, Chemical and Allied Trades Section of the New York Board of Trade, Skytop, Pa., the Railroad Y.M.C.A. at Albany, and special appearances which he made on programs of the following county medical societies Bronx, Erie, Kings, Monroe, and Queens, New York, and Essex County Medical Society, New Jersey

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standing of unfortunate members can be upheld in their communities. Therefore, members will serve the best interests of the profession as a whole as well as help reduce the cost of their individual protection by using all honorable means to discourage ill founded and unjust actions against other members.

Raising rates to meet rising costs is not a constructive method of solving the problems of a self-insuring group, although such action must be taken when and if necessary. A better solution for all concerned is united action that will reduce costs. In some cases it may be necessary to require surcharges for certain groups whose loss experience proves to be an unequal burden upon the cost of the Group Plan as a whole. For example—the Committee notes an increase in the number and cost of suits resulting from the use of diathermy and plastic surgery and these classes will be studied carefully during the year to determine if a surcharge is necessary to cover the additional cost of these specialties.

As predicted in our report of last year a substantial number of suits were instituted against uninsured members. In the ordinary course of events some of these suits will be lost or settled out of court and the payments, whatever they may be, will have to be borne by the individuals concerned. In contemplating the situation of these members, as well as those who year after year find themselves in the situation of having to face malpractice suits without adequate insurance protection, the Committee desires to renew its recommendation that the Council use its best efforts to bring forcefully to the attention of uninsured members the fact that for only \$28 they can secure a minimum policy and assure themselves of protection up to \$5,000.

Although several competing companies have continued their efforts to draw members away from the Group Plan, the number of members insured during the year increased nearly 400. About 50 per cent of the entire membership is now covered by the Group Plan. In the membership list, however, there are a considerable number of doctors who are retired, living outside the state, or who are engaged in institutional, corporate, or research work and have no malpractice exposure. Thus the percentage of those in medical practice with its corresponding malpractice exposure who are now insured under the Group Plan is well over 50 per cent.

In all of its study, the Committee has had the able assistance of the legal and insurance representatives of the Society and the full cooperation of the officers of the Yorkshire Indemnity Company. With respect to the latter, the Committee has had ample cause to feel confidence in their understanding of our problems and the integrity of their efforts in helping to solve them.

### Centralization of Offices

At your last meeting in 1939 you discussed the question of moving the New York offices from 103rd Street to a location near the Grand Central Station. No definite action was taken until the matter assumed added importance toward the end of the year when the Council was compelled to direct a move.

This decision rested upon several grounds, the most pressing of which was financial. It had become necessary for the New York Academy of Medicine to raise the rate charged for main-

tenance with the beginning of 1940, with further advances in the succeeding two years.

Suitable quarters were found at 292 Madison Avenue, at 41st Street, within two short blocks of the Grand Central Station. The whole twenty-first floor was rented at the satisfactory rate of \$1.75 per square foot. This will give a total only slightly above the present outlay and well below the final total set for the present quarters.

This arrangement has several real advantages. The different units now housed on three different floors will be collected on a single floor thus promoting efficiency and saving time. It will also make for the greater convenience of officials and committees who come from outside the Borough of Manhattan. Not only will the new office be easy of access, but there will be a definite though not large saving in travel expense.

The lease is for ten years, and the owner will finance the rather expensive partitioning. Now at the time of writing (March 18, 1940), it seems probable that the actual move can take place on April 15, 1940, or possibly a few days before that date.

### Annual Meeting Arrangements

The Council decided to discontinue the practice of mailing the booklet program to the entire membership. Instead there will be presented copies to those who actually attend the meeting.

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### Dues Year and Fiscal Year

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Of recent years, the difference in time of the start of the fiscal and dues years has seemed unfortunate to those in charge of finances. In 1939 the House of Delegates adopted revisions of Bylaws to change the dues year to fit the present fiscal year, this to go into full effect on July 1, 1940, with a special arrangement for payment of six months' dues only for the first half of 1940.

Following this action the county societies in the fall of 1939 began to doubt the wisdom of this change. Criticism from several has come to the Council. The Kings County Society with 2,787 members explained its protest in the following language:

Some of the disadvantages of this change in dues year are

1 That July 1 is a bad time of year to send and collect dues bills. Objection is that summer is no time to collect money. Members and their families are planning vacations with the added expenditure this requires, practice is diminished with the resultant decrease in income. Collections during the summer months are also very poor. There are no county society meetings and members are not county medical society minded. At present 80 per cent of the dues of our members are collected by June 1. This is also the experience of other county medical societies. This will not be the case if dues bills are sent July 1. If we are compelled to conform to the amended Bylaws we estimate that there will be a decrease in State Society income of from \$3,000 to \$5,000 from our society alone in loss of members.

2 That it is most inadvisable at this time because of the 'jittery' and unstable conditions generally and those relating more particularly to the medical profession.

3 It would create difficulties in the matter of reinstatement of members dropped for non-payment or suspended. It is a simple matter to adjust account books but it is not simple to adjust human beings. The present basis of collecting dues has been in effect for more than a quarter of a century. Members have been accustomed to the date their dues are due, when they go in arrear and when they are dropped. It is not an easy matter to re-educate 16,000 members after reaching the present successful situation.

4 Under the old Bylaws dues and assessments of new members elected after November 1 were credited for the next calendar year. Crediting new members elected after May 1 is no inducement to stimulate physicians to join, as it comes at a time of year when meetings are about over until fall. It does not have the same appeal as the old allowance which came in the midst of an active period.

5 That there will be general rebellion and protest against the payment of one and one-half years dues in 1940 which will be required in conformance with this amendment.

6 In our Society as in the case of other societies with large membership, the actual work connected with sending bills and making collections would come at the vacation period requiring additional personnel and extra expense.

Believing that both county and state societies will suffer seriously financially if the change in dues year is not kept on the old basis, the special committee appointed by the president of the Medical Society of the County of Kings unanimously voted to memorialize the Council of the Medical Society of the State to take such action as may be required to postpone putting into operation the change in dues year and the other provisions relating thereto as amended in Chapter I, Section 2 of the Bylaws, pending reconsideration of this matter at the next meeting of the House of Delegates."

The Council was informed at its September 14 1939 meeting that twenty-five secretaries

at the Conference of County Secretaries the day before had heard adverse reactions while only five had heard no adverse comment.

The Council passed the following resolution

WHEREAS, The Council of the Medical Society of the State of New York believes that it is impossible to enforce the recent amendment to the Constitution, and

WHEREAS, This opinion is based upon various written protests from the larger County Societies and oral protests registered by the Secretaries of other County Societies meeting at the Secretaries' Conference, therefore be it

RESOLVED, That the Council state that it has no authority or power to act in this situation but that nevertheless the Council leaves to each county society for its own consideration the decision as to the most practical manner of collecting dues pending reconsideration by the House of Delegates of the amended Bylaw, Chapter I, Section 2.

Legal Counsel had given an opinion that while the new provision was mandatory as to State Society assessments it was not mandatory for county society dues.

The Council transmitted this resolution and this opinion to the component county societies. So far as it knows they have not changed their dues years--and the Council has not pressed them.

### County Society Transfers

Transfers from one county society to another are at times asked by members early in the calendar year, and the question came to the Council as to the possibility under the Bylaws of the State Society of payment of county society dues to the receiving society. The Council, in reply, pointed out that the State Society Bylaws call for a certificate from the transferring society which shall state "as to good standing." This term the Bylaws define as "A member is in good standing when his dues to his county society and the assessment of the State Society have been paid when they are due and payable."

The Council advised the county societies that it had gone on record "That when a member requests a transfer, the secretary and president of the original county society should not sign the transfer until that member has paid his county dues and state assessment for the current dues year."

### Contract Practice

Pursuant to your action on April 24 1939, suggestion was duly made to the county societies that they set up committees to confer with members contemplating professional contract service. The Westchester County Medical Society carried this out by sending to its members its official resolution, adopted April 19 1938 and it is here reproduced as an excellent example.

WHEREAS, There is evidently a trend toward the employment of physicians on contract by various organizations and agencies, and

WHEREAS, Certain types of contract practice now in effect or proposed are clearly inimical to the best interests of the patient, the public, and the medical profession, and

WHEREAS, The American Medical Association



standing of unfortunate members can be upheld in their communities. Therefore, members will serve the best interests of the profession as a whole as well as help reduce the cost of their individual protection by using all honorable means to discourage ill founded and unjust actions against other members.

Raising rates to meet rising costs is not a constructive method of solving the problems of a self-insuring group, although such action must be taken when and if necessary. A better solution for all concerned is united action that will reduce costs. In some cases it may be necessary to require surcharges for certain groups whose loss experience proves to be an unequal burden upon the cost of the Group Plan as a whole. For example—the Committee notes an increase in the number and cost of suits resulting from the use of diathermy and plastic surgery and these classes will be studied carefully during the year to determine if a surcharge is necessary to cover the additional cost of these specialties.

As predicted in our report of last year a substantial number of suits were instituted against uninsured members. In the ordinary course of events some of these suits will be lost or settled out of court and the payments, whatever they may be, will have to be borne by the individuals concerned. In contemplating the situation of these members, as well as those who year after year find themselves in the situation of having to face malpractice suits without adequate insurance protection, the Committee desires to renew its recommendation that the Council use its best efforts to bring forcefully to the attention of uninsured members the fact that for only \$28 they can secure a minimum policy and assure themselves of protection up to \$5,000.

Although several competing companies have continued their efforts to draw members away from the Group Plan, the number of members insured during the year increased nearly 400. About 50 per cent of the entire membership is now covered by the Group Plan. In the membership list, however, there are a considerable number of doctors who are retired, living outside the state, or who are engaged in institutional, corporate, or research work and have no malpractice exposure. Thus the percentage of those in medical practice with its corresponding malpractice exposure who are now insured under the Group Plan is well over 50 per cent.

In all of its study, the Committee has had the able assistance of the legal and insurance representatives of the Society and the full cooperation of the officers of the Yorkshire Indemnity Company. With respect to the latter, the Committee has had ample cause to feel confidence in their understanding of our problems and the integrity of their efforts in helping to solve them.

### Centralization of Offices

At your last meeting in 1939 you discussed the question of moving the New York offices from 103rd Street to a location near the Grand Central Station. No definite action was taken until the matter assumed added importance toward the end of the year when the Council was compelled to direct a move.

This decision rested upon several grounds the most pressing of which was financial. It had become necessary for the New York Academy of Medicine to raise the rate charged for main-

tenance with the beginning of 1940, with further advances in the succeeding two years.

Suitable quarters were found at 292 Madison Avenue, at 41st Street, within two short blocks of the Grand Central Station. The whole twenty-first floor was rented at the satisfactory rate of \$1.75 per square foot. This will give a total only slightly above the present outlay and well below the final total set for the present quarters.

This arrangement has several real advantages. The different units now housed on three different floors will be collected on a single floor thus promoting efficiency and saving time. It will also make for the greater convenience of officials and committees who come from outside the Borough of Manhattan. Not only will the new office be easy of access, but there will be a definite though not large saving in travel expense.

The lease is for ten years, and the owner will finance the rather expensive partitioning. Now, at the time of writing (March 18, 1940), it seems probable that the actual move can take place on April 15, 1940, or possibly a few days before that date.

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The Council also approved of that attorney acting as an associate to Mr Brosnan. It was understood that no legal fees were to be paid by the State Society

### District Branches

From the executive officer, Dr Joseph S Lawrence, the Council has received the following report about the district branches and transmits it to you for such action as seems wise

"In June, after adjournment of the Legislature, I sat with the executive committee of each district branch, except the first, for the purpose of selecting the date and place for its next annual meeting and to outline a rough draft of the program. The president of the First District Branch called his conference in April, and owing to my engagements with the Legislature at that time, I could not attend but later in the summer I assisted him with the details of his program. The presidents of these component county societies were invited to sit with the executive committee in each district to assist with suggestions for the program and to report and discuss with the president of the district branch such of their activities as they preferred to speak of. This gives the district branch president an opportunity to familiarize himself with the county society affairs of his district. At the same time it affords an opportunity to the county society presidents to compare their activities with those of their neighbors. These conferences are very valuable, I have been told by many county society presidents"

Most of the branches have allowed their constitutions and bylaws to sink into innocuous desuetude and it might be well for them to be revived, especially since there might result a more certain representation from each county through the election of delegates

While the gross attendance at the district branch meetings approximates that of the annual meeting of the State Society, and probably 50 per cent of those who register at one do not register at the other, nevertheless, there are annually some counties from which no physicians register at any of the district branch meetings. It is probably also true that not all counties are represented at each annual meeting of the State Society

The Fourth District Branch has for years carried its meeting through from noon of one day to noon of the next and taken the evening for a banquet and addresses by invited guests. Last year the Third District Branch tried the plan but with doubtful success

It seems that in some of these districts a more extended scientific meeting might be warranted. Other scientific conferences that are held during the summer are the Health Officers' Conference at Saratoga Springs, the Keuka Conference on Lake Keuka (a two-day meeting), and the Tri-State Conference at Jamestown. Several county societies or combinations hold summer meetings but usually the scientific program is limited. Among these is the tri-county meeting including Genesee, Livingston and Wyoming counties. Westchester and Nassau counties and Tompkins and Cortland counties, have had joint summer meetings and several other counties have summer outings of their own which are usually very well attended

### Delegates, Representatives, and Nominations

*Other State Societies*—Delegates to the annual meetings of three state medical societies were appointed, in exchange

Vermont	Leo F Schuff, M D , Plattsburgh
Connecticut	Chas Gordon Heyd, M D , New York, Nathan B Van Etten, M D , New York
New Jersey	Terry M Townsend, M D , New York, Frederic E Elliott, M D , Brooklyn

*United States Pharmacopoeial Convention Inc*—To this convention scheduled to be held in Washington, D C , on May 14, 1940, there were appointed by the president with the approval of the Council these three

William A Groat, M D	Syracuse
Samuel W S Toms, M D	Nyack
Albert F R. Andresen, M D	Brooklyn

*American Society for the Control of Cancer—Women's Field Army*—To succeed Dr James E Sadlier to serve on the Advisory Board Dr William A Groat was chosen

*New York State Board of Examiners of Nurses—Nurse Advisory Council*—Dr Aloney L Rust of Malone, was nominated to succeed Dr Paul G Taddiken on the Advisory Council with Dr Peter Irving as alternate

Dr George R Critchlow, of Buffalo, was nominated to succeed himself on the Advisory Council for the term beginning January 1, 1940, with Dr Clayton W Greene as alternate

*New York State Grievance Committee*—Dr Orrin S Wightman was nominated to succeed himself when his term expires on December 31, 1939

### Physicians' Home, Inc

In accord with your action of 1939, the Council duly submitted twenty names as nominees for the Board of Directors of the Physicians' Home. From this list, that board elected twelve

Through its president, Dr Chas Gordon Heyd there came to the Council a request that the resolution following be presented to the House

WHEREAS, The Physician's Home, founded in 1918, is financially solvent and a going concern under the direct control of a Board of Directors selected from nominees made by the Council of the Medical Society of the State of New York, and

WHEREAS, The purpose of the Home is to provide home and sustenance for physicians residents of the State of New York and having been members of the Medical Society of the State of New York, and

WHEREAS The housing maintenance and care of these aged individuals is the responsibility of the medical profession

BE IT RESOLVED THAT, Permission be hereby given by the House of Delegates of the Medical Society of the State of New York for the treasurer of the society to memorialize the various component county medical societies to place upon their annual statements of dues a line, as follows

'For Physicians' Home (voluntary) \$1 00 "

FURTHERMORE, it may be suggested that a 50 per cent response from this appeal would

tion at its annual meeting in Atlantic City, in June, 1937, recognized the importance of this matter and amplified the Principles of Medical Ethics pertaining to contract practice. Now, therefore, be it

**RESOLVED**, That the Medical Society of the County of Westchester hereby affirms the provisions of Sections 2, 3, and 5 of Article 6 of Chapter III of the Principles of Medical Ethics of the American Medical Association relating to contract practice and calls the attention of all its members to these provisions, and be it further

**RESOLVED**, That henceforth members of the society shall be expected to submit any contemplated contracts, either verbal or written, involving delivery of their professional services before they are executed, to the Comitia Minora for its approval, and be it further

**RESOLVED**, That refusal on the part of a member to submit such a contract to the society for approval by the Comitia Minora, or should a member enter into a contract adjudged to be unethical under the Principles of Medical Ethics hereinbefore referred to, such act shall be deemed to be and be unethical conduct on the part of such member and he shall be subject to the disciplinary measures prescribed therefore, and be it further

**RESOLVED**, That any contract now held by a member of the Medical Society of the County of Westchester shall be submitted to the Comitia Minora, upon request, for inspection and information only, failure on the part of such a member to submit such a contract after request is made therefor, shall be deemed to be and be unethical conduct and such member shall be subject to the disciplinary measures prescribed therefor

**Conditions of Medical Practice Sec 2**—It is unprofessional for a physician to dispose of his services under conditions that make it impossible to render adequate service to his patient or which interfere with reasonable competition among the physicians of a community. To do this is detrimental to the public and to the individual physician, and lowers the dignity of the profession

**Contract Practice Sec 3**—By the term "contract practice" as applied to medicine is meant the carrying out of an agreement between a physician or a group of physicians, as principals or agents, and a corporation, organization, political subdivision or individual, to furnish partial or full medical services to a group or class of individuals on the basis of a fee schedule, or for a salary, or a fixed rate per capita

Contract practice per se is not unethical. However, certain features or conditions, if present, make a contract unethical, among which are (1) When there is solicitation of patients, directly or indirectly (2) When there is underbidding to secure the contract (3) When the compensation is inadequate to secure good medical service (4) When there is interference with reasonable competition in a community (5) When free choice of a physician is prevented (6) When the conditions of employment make it impossible to render adequate service to the patients (7)

When the contract because of any of its provisions or practical results is contrary to sound public policy. The phrase of "free choice of physician," as applied to contract practice, is defined to mean that degree of freedom in choosing a physician which can be exercised under usual conditions of employment between patient and physician when no third party has a valid interest or intervenes. The intervention of a third party who has a valid interest or who intervenes does not per se cause a contract to be unethical. A "valid interest" is one where, by law or necessity, a third party is legally responsible either for cost of care or for indemnity. "Intervention" is the voluntary assumption of partial or full financial responsibility for medical care. Intervention shall not proscribe endeavor by component or constituent medical societies to maintain high quality of service rendered by members serving under approved sickness service agreements between such societies and governmental boards or bureaus and approved by the respective societies

Each contract should be considered on its own merits and in the light of surrounding conditions. Judgment should not be obscured by immediate, temporary, or local results. The decision as to its ethical or unethical nature must be based on the ultimate effect for good or ill on the people as a whole

**Direct Profit to Lay Groups Sec 5**—It is unprofessional for a physician to dispose of his professional attainments to any lay body, organization, group, or individual, by whatever name called, or however organized, under terms of conditions which permit a direct profit from the fees, salary, or compensation received to accrue to the lay body or individual employing him. Such procedure is beneath the dignity of professional practice, is unfair competition with the profession at large, is harmful alike to the profession of medicine and the welfare of the people, and is against sound public policy

#### **Eichacker vs. New York Telephone Company**

Dr Henry C Eichacker of Queens County, while maintaining an office in his home, was charged and had paid for his telephone at business rates which are much higher than residence rates. He later sued the New York Telephone Company for return of the difference between the two rates. The Court ordered the Telephone Company to make this return, and the Telephone Company then appealed this decision.

Dr Eichacker had borne the expense of the suit up to that point, and then asked assistance of the State Society through the Queens County Medical Society for the appeal. He, and the Queens County Society both considered the matter of moment not to physicians only in that locality but elsewhere in the state and possibly throughout the country. They also anticipated that there might be not just one appeal but a series, possibly going up to the Supreme Court with mounting costs.

The Council first authorized the Legal Counsel, Mr Lorenz J Brosnan to act as *amicus curiae* at the appeal. Later, on request, it granted permission to Mr Brosnan to take over the case for Dr Eichacker if this course should be agreeable to Dr Eichacker and his attorney.

The Council also approved of that attorney acting as an associate to Mr Brosnan. It was understood that no legal fees were to be paid by the State Society.

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FURTHERMORE, it may be suggested that a 50 per cent response from this appeal would

give to the Physicians' Home sufficient finances to take additional guests under their care. The Council recommends its adoption.

### Revision of Principles of Professional Conduct

The Council wishes to transmit a report from the Special Committee on Revision of Principles of Professional Conduct consisting of

Orrin Sage Wightman, M D ,	New York
Chairman	
Otto A. Faust, M D	Albany
Leo F Simpson, M D	Rochester
Albert A Gartner, M D	Buffalo
Harry E Wheelock, M D	Fredonia

This report is to the effect that that committee deems it wise to study that subject for another year before making definite recommendations

### Election of Trustee

To fill the vacancy on the Board of Trustees created by the death of Dr James E Sadlier, the Council, at its meeting on November 9, 1939, unanimously elected Dr Thomas M Brennan, of Brooklyn.

### Memorials

Death struck three of the official family of the Society, and your Council has spread on the record the following memorials

#### DR. JAMES H BORRELL

The Medical Society of the State of New York has suffered an unusually tragic loss in the death of its president-elect, Dr James H Borrell, on September 28, 1939. Dr Borrell was born in Buffalo in 1890 and graduated from the School of Medicine of the University of Buffalo in 1914. He continued his studies by a three-year residency in the Edward J Meyer Memorial Hospital of Buffalo and followed this with a course in urology at the Post-Graduate Hospital of New York City. In his specialty Dr Borrell rose to the heights of leadership and became a member of the American Urological Association, a Fellow of the American College of Surgeons, and a diplomate of the American Board of Urology.

Along with his steady advance in the private practice of medicine, Dr Borrell contributed greatly to humanity by devoting a natural aptitude and much sacrifice of time and thought to the needs of organized medicine. He was for years, representing Erie County, a member of the house of delegates of the State Society. In 1936 he was elected second vice-president, and in 1937 he was chosen delegate to the American Medical Association. In 1938 he became a member of the Council of the State Medical Society and was selected chairman of the Committee on Legislation. At the Annual Meeting in 1939, the Society recognized and honored him by elevating him to the office of president-elect.

His love and consideration for others, his fairness, and his frank fearlessness to defend the cause of justice are a revered memory to his colleagues and will be an inspiration to young physicians for many years to come.

Be it resolved that the Council of the Medical Society of the State of New York adopt these statements as an appropriate and permanent

record of the death of its late president-elect, Dr James H Borrell

#### DR JAMES E SADLIER

Dr James E Sadlier, past-president of the Medical Society of the State of New York, was, at the time of his death, chairman of its Board of Trustees, having been a member of that Board continuously since 1935. Previously he had been chairman of the Public Relations Committee from 1928 to 1935, and as such was actively engaged in the formulation of guiding principles for the acceptance of the responsibilities of organized medicine for the public good. He was the enunciator of principles of social and economic justice which are secure in medical precept forever. During the period of his executive connections with the Medical Society of the State of New York (1926 to 1939), as president-elect, president, and past-president, things were designed that have become essential machinery for the influential operation of the State Society in relation to public affairs, and for a beginning of a new epoch in the practice of medicine and the social sciences. This particularly important period in his career was the most rapidly changing one of all time in medicine and in public health administration. That he lived effectively the while with simplicity and honesty, saying and doing things with clarity, thoughtfulness, and tranquility is his unique contribution to medicine as an authoritative agency.

Dr Sadlier was never a time-server, never did he seek the limelight. He was an unostentatious doer of good. The bright light, however, shone on him to illumine his very worth. As a busy, successful surgeon and hospital organizer he sought fulfillment of his obligations not only to his family and his profession, but also to the civic affairs and to the religious life of his home town. He built for the community, he worked for it, and he brilliantly served it. He was a forceful, charitable, and lovable friend to all men.

We hear at times some elder practitioner of medicine spoken of as "a doctor of the old school." It is a term of endearment and respect. It grows out of an association with a pleasing character through many years. Dr Sadlier, however, was not a doctor of the old school. To be sure, he had the courtliness, the courteousness, and the charm of bygone days. Nevertheless, he was a doctor of a new school. He was of that school that sees vividly and analyzes keenly the more recent things that have glorified, advantaged, puzzled, or troubled medicine as the circumstance may be. A warm, colorful personality, his equanimity his freedom from rancor in debate, and his generosity made him a much sought counselor. He did not raise a voice in idle controversy, let petulance mar argument, or anger rob understanding.

His own standards for charity through righteousness, for human kindness, and for gentle sincerity fix in him the attributes of a great physician and a noble friend.

#### DR. GEORGE M FISHER

Dr George M Fisher of Utica, served the Medical Society of the State of New York con-

tinuously in various capacities from 1917 until his death, February 25, 1940. He was a member of the Committee on Public Relations, which he created during his presidency, and the Committee on Scientific Work and twice on the Committee of Arrangements for Annual Meetings. He was a delegate from his county to the State Society House for many years, becoming vice-speaker of the House from 1922 to 1926. He was elected a member of the House of Delegates of the American Medical Association in 1923 representing this state continuously and faithfully until the end. He was president of the Medical Society of the State of New York in 1926-1927.

Dr. Fisher has been a leader in movements to combat cancer and tuberculosis. He was chairman of the Oneida County Medical Society's committee on cancer control which a year ago launched an extensive educational campaign.

During his presidency of the State Society he was instrumental in formulating a plan for co-operation between the medical profession and voluntary health agencies throughout the State. This plan served as a model for the proper development of public health work at this time,

not only in this state, but elsewhere. It provided that voluntary health agencies should have the cooperation of county medical societies through substantial representation upon the agency boards. This principle was approved by the Medical Society of the State of New York, and the State Charities Aid Association, and had a wholesome effect.

Dr. Fisher was active in political, fraternal, and medical fields, being one of Central New York's best known physicians. He specialized in dermatology and was particularly interested in the control of syphilis as a public health measure through medical and lay effort, and was an early organizer in the development now so widespread.

In the death of Dr. Fisher, this State Medical Society has suffered grievous loss. He was a sturdy worker and loyal friend. His wisdom and judgment, always available right up to the time of his death, were exceptionally sound and frequently sought.

Respectfully submitted,  
PETER IRVING, M.D., *Secretary*

March 18, 1940

### Report of the Treasurer

*To the House of Delegates, Gentlemen*

The following pages contain a summary and abstract of the official auditors' report for the calendar year 1939. As on previous occasions your Treasurer proposes to supplement this formal statement by an analysis of our Society's financial status at the next meeting of the House of Delegates, with certain comments and suggestions for consideration by its members.

Your Treasurer desires to record at this time, however, his appreciation of the aid and assistance rendered by the General Manager and the office staff in the conduct of the financial affairs of the Society.

Respectfully submitted,  
GEORGE W. KOSMAK, M.D., *Treasurer*

March 9, 1940

## Auditors' Statement

We have examined the balance sheet of Medical Society of the State of New York as of December 31, 1939, and the statements of fund additions and deductions and capital for the year then ended, have reviewed the system of internal control and the accounting procedures of the Society, and without making a detailed audit of the transactions, have examined or tested accounting records of the Society and other supporting evidence, by methods and to the extent we deemed appropriate

sheet and related statements of fund additions and deductions and capital present fairly the position of Medical Society of the State of New York at December 31, 1939, and the results of its operations for the year, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year

WOLF AND COMPANY  
Certified Public Accountants

Dated at New York, New York  
February 16, 1940

## Balance Sheet—December 31, 1939

Assets			
Current Assets—General Fund—General			
Cash on hand and in banks		\$ 70,703 02	
Securities—at quoted market value—			
Stocks	\$144,838 12		
Bonds & Mortgages	76,661 85		
Accrued interest on bonds	1,703 56	223,203 53	\$293,906 55
Recouping Fund			
Cash in bank		\$ 1,198 06	
Securities—at quoted market value—			
Bonds	\$ 12,922 50		
Accrued interest	185 41	13,107 91	14,305 97
Publications Account			
Cash on hand and in bank		\$ 6,861 61	
Accounts Receivable, less Reserve	\$ 2,511 54		
Inventory—print paper	4,086 49	6,598 03	13,459 64
Total Current Assets in General Funds			\$321,672 16
Prepaid Values and Deferred Charges			
General Fund—Annual Meeting, 1940		\$ 224 21	
Directory expenses		19,895 78	
Publications Division—Revolving Funds—incomplete		1,078 76	
Total Prepaid Values and Deferred Charges in General Fund			21,198 75
Fixed Assets—Furniture and Fixtures—at memorandum value			
General Fund		\$ 1 00	
Publications Division		1 00	2 00
Inter-Society Account—Contra			
Due Publications Division from General Division of General Fund			19,992 10
Total Assets and Inter-Society Account—General Fund			\$362,865 01
Trust Funds—Assets			
Lucien Howe Prize Fund			
Cash in banks	\$ 1,480 81		
Bonds—at quoted market value	\$ 2,307 50		
Accrued interest	12 92	2,320 42	\$ 3,801.23
Merritt H. Cash Prize Fund			
Cash in banks	\$ 765 62		
Bonds—at quoted market value	\$ 1,085 00		
Accrued interest	5 84	1,090 84	1,856 46
A. Walter Suter Lectureship Fund			
Cash in banks	\$ 461 81		
Bonds—at quoted market value	\$ 1,360 00		
Accrued interest	8 33	1,368 33	1,830 14
			7,487 83
Total Assets and Inter-Society Account—All Funds			\$370,352 84

## Liabilities and Capital

## Current Liabilities—General Fund—General

## Accounts Payable—

Federal unemployment tax

\$ 701 70

Associated Hospital Service

\$ 702 60

## Publications Account

## Accounts Payable—

Trade

\$ 8,488 47

Commissions

326 05

Social taxes

161 60

8,976 12

## Total Current Liabilities of General Fund

\$ 9,678 72

## Deferred Income

## General Fund—General

Members' dues—1940

\$ 2,620 00

Directory Income for 1940 received in advance

17,611.25

\$ 20,231.25

## Publications Division—

Advance subscriptions to JOURNAL

668 14

## Total Deferred Income of General Fund

20,897 39

## Inter-Society Account—Contra

Due Publications Division from General Division of General Fund

19,992 10

## Total Liabilities—General Fund

\$ 50,568 21

## Capital Accounts

General Division of General Fund

\$273,101 59

Recouping Fund

14,305 97

Publications Division

24,889.24

## Total Capital—General Fund

312,296 80

Total Liabilities, Inter-Society Account and Fund Capital Accounts of General Fund \$362,865 01

## Capital Accounts—Trust Funds

Lucien Howe Prize Fund

\$ 3 801 23

Merritt H. Cash Prize Fund

1,856 46

A. Walter Suter Lectureship Fund

1,830 14

7,487 83

## Total Liabilities, Inter-Society Account and Capital—All Funds

\$370 352 84

*On the following pages will be found the Statement of Fund Additions and Deductions for Twelve Months Ended December 31, 1939*



**Statement of Fund Additions and Deductions for Twelve Months Ended December 31, 1939**

<b>General Fund—General Division—Additions</b>				
Annual dues received		\$162,006 00		
Dividends received		5,175 75		
Bank interest, savings accounts		345 82		
Bond interest		5,437 44		
Gain from sale of bonds		3,039 97		
Adjustment 1938 Federal Unemployment Tax		100 00	\$176,104 98	
<b>General Fund—General Division—Deductions</b>				
<b>Office Expenses</b>				
Rent	\$ 2,000 01			
Telephone	481 53			
Postage	951 30			
Stationery and printing	1,288.27			
Auditing	250 00			
Custodian fees—securities	477 10			
Sundry	1,771 95			
Insurance and bonding	113 25			
Taxes—Federal Old Age Benefit and New York State				
Unemployment Insurance	1,913 18	\$ 9,846 59		
<b>Salaries</b>				
General \$21,621 44 less \$5,691 49, amount transferred to Directory Expense 1940 and deferred	15,929 95			
Emeritus Office Manager	3,000 00			
Secretary-Manager	12,000 00	30,929 95		
<b>Traveling</b>				
A.M.A. Delegates	\$ 1,434 65			
Council	2,298 65			
General	43 67			
President	1,646 31			
Secretary-Manager	816 55			
Executive Officer—Legislative Bureau	1,218 54			
Trustees	638 42			
Board of Censors	123 65			
Delegates, New Jersey Convention	24 90	8,245 34		
<b>Committees of the Council—Expenses</b>				
Travel	\$ 2,336 78			
Other expenses	979 08			
	\$ 3,315 86			
<b>Public Health and Education</b>				
Clerical salary	\$ 1,560 00			
Travel and other expenses	1,851 04			
	\$ 3,411 04	6,726 90		
<b>Legal Counsel</b>				
Retainer	\$ 12,000 00			
Expenses	452.29	12,452 29		
<b>Workmen's Compensation Bureau</b>				
Salary—Director	\$ 5,000 00			
Clerical salaries and other expenses	3,731.21	8 731 21		
<b>Legislative Bureau</b>				
Salary—Executive Officer	\$ 10,000 00			
Salary—clerical	2,500 00			
Other expenses	5,659 65	18,159 65		
		\$ 95,091 93		
<b>District Branches</b>				
Annual Meeting expense	\$ 8,453 36	\$ 1,507 32		
Less income received	8,155 61	297 75		
		655 04		
Conference of County Secretaries		550 00		
Stenotypist—Council Meetings		\$ 98,102 64		
		35,000 00		
		20,250 63		
<b>Donation to Publications Division—contra</b>				
Members' Dues—Income, transferred to Publications Division	\$ 3,125 50			
Decrease in quoted market value of securities	666 10	3,791 60	157,144.87	
Decrease in accrued interest on bonds				
			\$ 18,960 11	
<b>Excess of Income over Expenses—General Division of General Fund</b>				

## Statement of Fund Additions and Deductions—Continued

## (General Fund—Continued)

## Recouping Fund—Additions

Bond interest	\$ 608 33		
Bank interest	6 70		
Gain on sale of bond	166 64		
Increase in quoted market value of bonds	<u>140 00</u>	\$ 921 67	

## Recouping Fund—Deduction

Decrease in accrued interest on bonds		<u>12 50</u>	
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## Net Addition—Recouping Fund

\$ 909 17

## Public Relations Bureau—Additions

Sale of pamphlets, etc.	\$ 170 59		
Services of Director sold	<u>125 00</u>	\$ 295 59	

## Public Relations Bureau—Deductions

Salaries, extra help	\$ 930 25		
Social taxes	40 00		
Stationery, printing, mimeographing	1,214 79		
Telephone and telegraph	318 38		
Press clippings and radio reports	262 47		
Travel and entertaining	464 24		
Subscriptions to periodicals	253 21		
Office supplies and expense	989 00		
Printing	<u>1,562 64</u>		
Postage	<u>2,495 03</u>	8 510 01	

## Net Excess Expense over Income—Public Relations Bureau

\$ 8,214 42

## Publications Division—Additions

Donation from General Fund—contra		\$ 35,000 00	
Adjustment, 1938 account		<u>119 54</u>	

## JOURNAL—Additions

Advertising	\$ 50,278 11		
Circulation—members, contra	20,250 63		
Sundry	926 63		
Sale of pamphlets	<u>4,619 66</u>	76,075 03	\$111,194 57

## JOURNAL—Deductions

Salaries—Office—both Journal and Bureau	\$ 11 989 50		
Salaries—Editorial	<u>9,142 50</u>	\$ 21,132 00	

Publication cost		\$ 38,934 11	
Mailing, postage and express		6,618 80	
Agency commission	\$ 2,204 75		
Solicitors' commission	<u>5,340 00</u>	7,544 75	

Discounts allowed	1 758 52		
Cost of reprints	3,632 82		
Wrappers and make-up forms	1,578 34		
Rent—including activities of both Journal and Bureau.	1,079 98		
Cuts, mats, etc.	1,408 36		
Stationery and printing	<u>282 28</u>		
Telephone and telegraph	275 74		
Postage	298 35		
Provision for bad debts	535 18		
Office supplies and expense	918 77		
Press clippings and radio reports	313 42		
Travel and entertaining	<u>165 16</u>		
Social taxes—Federal Old Age Benefit and Unemployment Insurance	819 79		
Auditing	<u>675 00</u>	66 839 37	87,971 37

## Excess Income over Expense—Journal

## Summary

\$ 23,223 20

## General Fund—Net Income over Expense

\$ 18 960 11

## Recouping Fund—Net Income over Expense

909 17

## JOURNAL—Net Income over Expense

23,223 20\$ 43,092 48

## Deduct Public Relations Bureau Net Expense over Income

\$ 8,214 42

## Excess of Income over Expenses General Fund

\$ 34,878 06

## Statement of Fund Additions and Deductions—Continued

## Trust Funds

## Lucien Howe Prize Fund—Additions

Bond interest	\$	110 88		
Bank interest		22 26		
Gain from sale of bond		11 93	\$	145 07

## Lucien Howe Prize Fund—Deductions

Decrease in quoted market value of bonds	\$	124 14		
Decrease in accrued interest on bonds		1 51	125 65	\$ 19 42

## Merritt H Cash Prize Fund—Additions

Bond interest	\$	43 39		
Bank interest		9 36		
Gain from sale of bond		11 92		
Increase in quoted market value of bonds		25 86	\$	90 53

## Merritt H Cash Prize Fund—Deduction

Decrease in accrued interest on bonds			1 52	89 01
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## A Walter Suter Lectureship Fund—Additions

Gift from Estate of A Walter Suter	\$	2,502 43		
Bond interest		67 51		
Bank interest		7 08		
Increase in accrued interest on bonds		5 62	\$	2,582 64

## A Walter Suter Lectureship Fund—Deductions

Decrease in quoted market value of bonds	\$	720 00		
Loss on sale of bond		32 50	752 50	1,830 14

## Net Addition to Trust Funds

\$ 1,938 57

## Summary

Excess of Income over Expenses—General Fund	\$ 34,878 06
Excess of Income over Expenses—Trust Funds	1,938 57

## Grand Total

\$ 36,816 63

## Report of the Board of Trustees

*To the House of Delegates, Gentlemen*

It becomes a very pleasant duty to be able to report again that the financial structure of our Society has withstood the buffetings of the past few years surprisingly well. In fact, a careful check-up of our holdings, by experts, has furnished the information that we stand very high in the rating of similar organizations.

Naturally, this state of affairs is very gratifying to all of us but it would not have been possible without the heartiest cooperation of all those concerned with carrying on the various Society activities, from the planning of a budget to its final distribution.

We have again lived within our income from dues but it has been a close squeak. The amount of leeway between a carefully planned budget and our income from dues is not very great, especially when the income from dues doesn't quite come up to the estimate and some groups find they have underestimated their financial needs.

Under such circumstances it occasionally becomes the very disagreeable duty of the Board of Trustees to modify or turn down an appeal for additional funds in order not to overdraw our account, but the disappointed ones have never sulked and somehow the work has gone on.

These problems are difficult but the Investment Fund is the headache—it is never static.

At nearly every meeting of the Board considerable time is devoted to studying our list of hold-

ings and trying to decide what to do with certain items. We have been very fortunate in securing the assistance of certain bank officials but we are convinced that there must be a better method and would therefore recommend to the House of Delegates that the Board of Trustees be empowered to make other arrangements for the care of our Investment Fund if careful study by the Board shows it to be practicable.

The Society is to be congratulated upon the recent leasing of the entire twenty-first floor at 292 Madison Avenue for the centralization of all Society activities. The location is central, the floor is well lighted, clean, and quiet.

The Treasurer has devised a system of book keeping to fit in with the new scheme of things so that it will be possible to find the true financial status of any department at a moment's notice and therefore the work of the auditors will be much simplified and their report will be much more comprehensive and instructive because all facts regarding each transaction will be available.

The Board wishes to thank Dr. Irving and his corps of assistants for their untiring help.

Respectfully submitted  
 HARRY R. TRICK M D, *Chairman*  
 JAMES F. ROONEY, M D  
 GEORGE W. COTTIS M D  
 WILLIAM H. ROSS M D  
 THOMAS M. BRENNAN M D

## Report of the Board of Censors

### *To the House of Delegates, Gentlemen*

An appeal by a member of one of the component county medical societies from a decision of that county society was heard on December 14, 1939

This member had in 1939 preferred charges against a fellow member for violation of Section 15 of the Principles of Professional Conduct, which reads

"When a physician has been called as a consultant none but the rarest and most exceptional circumstances would justify the consultant in taking charge of the case he must not do so merely on the solicitation of the patient or friends"

The county society had on trial acquitted the defendant. The plaintiff appealed from this decision

The Board, after review of the evidence, reversed the decision of the county society, finding the defendant guilty as originally charged. The parties to the action were duly notified in writing by the secretary

The Board of Censors of the Medical Society of the State of New York, in handing down its opinion that the infraction of Section 15 was cause for discipline by censure recommended strongly that the governing committee of the county society apply the discipline in closed session without publication of the names of the two members involved. The Board directed that this report be framed in similar fashion

Respectfully submitted,  
PETER IRVING, M D, *Secretary*

## Report of the Counsel

### *To the House of Delegates, Gentlemen*

Your Counsel herewith submits his report of the activities of the Legal Department of the Medical Society of the State of New York for the period from February 1, 1939, to and including January 31, 1940

Within the fair and reasonable confines of a report nothing but the barest outline of the work done in our department can be given. We can only state conclusions and these cannot give any adequate picture of the work done or the responsibility assumed by our department

In the field of litigation alone we were able (despite the addition to 177 new cases) to reduce the pending cases from 441 to 420, a drop of 21 cases

As in other years we again record our appreciation for the assistance and cooperation furnished by your officers and your committeemen. It has been a pleasure to work with them

In making his report, your Counsel adheres to the convenient category employed in previous years whereby his activities have been divided into three main divisions (a) the actual handling of malpractice actions before courts and juries and in the appellate tribunals, (b) counsel work with officers, committees, and individual members of the Society, and (c) legislative advice and activities

**Litigation** We have repeatedly pointed out to the members the danger done by careless, hasty, and unjustified criticism by one physician of the work of another. We do so again this year. Although not always susceptible of proof it is the fact that many malpractice actions are commenced by such remarks. It is true that in most instances the criticizing doctor does not intend that the patient commence a malpractice action based on the remark but it is equally true that in these times not much is needed to plant in the mind of a patient the seed of litigation against another physician

It is not necessary to call to the attention of those who have been members of your State Society for some time the ever present hazard of a malpractice action to the practicing physician. It may be pertinent however to bring home to the younger men or those who have just joined the Society, this most important fact

It is in recognition of this fact that for the past eighteen years the members of your Society have had an opportunity through the operation of your Group Plan to protect themselves adequately against this hazard. Through a union of defense and indemnity the successful operation of the Group Plan is a matter of record. Indeed it may be truthfully said that it is the envy of medical societies all over the country

We note a gain of 1 per cent in the insured members of your Society. While this is, of course, encouraging, we feel that the Group Plan should have within its ranks many more members of your Society. It is one of the most important activities of your Society and it deserves the loyal support of every member. We have never failed to hear a genuine regret voiced by an uninsured member who has been sued, over his failure to take advantage of your Group Plan.

Special mention should be made at this point of the fine spirit displayed by everyone connected with the Yorkshire Indemnity Company, the carrier under your Group Plan. Entering their fifth year as the carrier under your Group Plan, they have lived up to not only the letter and the spirit of all of their obligations to your Society and its members but also they have proved to be genuinely and vitally interested in assisting us in every way to make the Group Plan successful. Appreciation is here recorded of the cooperation furnished by Mr. Horace Crowell, Jr., claim agent of the Yorkshire Indemnity Company with whom your Counsel and office staff are in almost daily conference and consultation

Mention should also be made of the splendid work of your Insurance Committee headed by Dr. Clarence G. Bandler and Mr. Harry F. Wavvig, your authorized insurance indemnity representative. With these gentlemen your Counsel has conferred on a number of occasions during the reporting period

Under this heading also recognition should be accorded to my associates, Mr. William F. Martin and Mr. Thomas H. Clearwater, the attorney for the Society. Not only in the present reporting period but for many years they

TABLE 1—COMPARISON OF THE NUMBER OF SUITS INSTITUTED AND DISPOSED OF IN 1938-1939 AND 1939-1940

	Instituted		Disposed of	
	1938-1939 (12 months)	1939-1940 (12 months)	1938-1939 (12 months)	1939-1940 (12 months)
1 Fractures etc	22	16	19	14
2 Obstetrics etc.	18	11	20	15
3 Amputations	3	3	3	1
4 Burns x rays etc.	22	19	33	32
5 Operations abdominal eye tonsil, ear, etc	41	49	52	52
6 Needles breaking	2	2	2	3
7 Infections	12	16	19	10
8 Eye infections	5	4	4	2
9 Diagnosis	17	24	24	22
10 Lunacy commitments	1	2	2	3
11 Unclassified—medical	39	24	51	37
Totals	177	170	229	191
<i>Further Comparisons</i>				
Actions for death	17	15	26	22
Infants actions	23	16	27	20
Totals	40	31	53	42
<i>How Disposed of</i>				
Settled			55	30
Judgment for defendant dismissed discontinued or abated			168	185
Judgment for plaintiff			6	3
Totals			229	191
<i>Further Comparisons</i>				
Appeals			4	3
Judgments for defendant				1
Judgments for plaintiff				
Pending on January 31, 1939	441			
Pending on January 31, 1940	420			

have both done magnificent work. Mr Martin's reputation in the defense of malpractice actions is well and favorably known throughout the whole state. In the twelve years that he has been engaged in this work he has come to grips in a practical way with every sort of a medicolegal problem. His experiences in this field have won for him expressions of the highest approval from judges, lawyers, and doctors in all parts of the state, not only for his exceptional ability as an advocate but for his fine personal qualities as well.

I cannot commend too highly the splendid work of Mr Clearwater, who for many years has had close contact with the members of your Society and with its officers and committeemen. Mr Clearwater is a gentleman of exceptional ability and character and your Counsel feels fortunate indeed to have the benefit of his services as one of his associates.

We cannot leave this subject without paying tribute to the splendid spirit of industry, loyalty, and devotion manifested by your Counsel's entire staff, both legal and clerical.

With this preliminary statement we note that there were commenced in the present reporting period 170 cases as against 177 last year. These figures, of course, do not include a number of claims outstanding in which suit may ultimately be brought. Of equal importance with the actual work of litigation is the preventative work done by your Counsel and his office staff. Throughout the year we are in consultation with many claimants and their attorneys and frequently we have been successful in demonstrating to them in fact and in law that no valid claim exists. Thus the claims never reach a suit stage.

Table 1 shows that during the present reporting period we disposed of 191 cases as against 229 disposed of during the previous reporting period, 50 of these cases were settled, and of

the balance 138 cases were successfully terminated in favor of the physicians, 3 cases resulted in judgment in favor of the plaintiff as opposed to 6 verdicts for the plaintiff in the prior reporting period. In the cases in the appellate courts we were successful in three instances.

We note from Table 1 that there were pending as of January 31, 1940, 420 cases as against 441 cases pending January 31, 1939.

Table 2 gives a comparison of the number of members insured in 1937, 1938, 1939, and 1940, the number of members in the county societies, and the percentage of insured members in the county societies and in the entire State Society.

**Counsel Work.** During the period of this report your Counsel prepared for the Society's JOURNAL articles in the nature of editorial comment. These articles have included the following:

Malpractice—Failure of Proof in Fracture Case, Physicians and Surgeons—Fee for Professional Services, An Unlicensed Practitioner of Medicine on Trial for Manslaughter, Licensing of Foreign Physicians, A Physician's Fee, Malpractice—Expert Testimony Required, Malpractice—Bad Result Not Proof of Negligence, Advertising by Professional Men, Death Action—Measure of Damages, Insurance—Permanent Disability, Malpractice—Plaintiff's Burden of Proof, Two Interesting Wills.

Your Counsel has also digested case reports upon malpractice actions which were felt to be of special interest to the members of the profession. These have been published in the State JOURNAL. The case reports which were published during the previous year were as follows:

Removal of Superfluous Hairs, Treatment of Potts' Fracture, Treatment of Obesity, Treatment of Injury to Hand, Claimed Burn Followed by Treatment of Acne, Claim of Malpractice in an Obstetric Case, Anesthesia Death, Case

TABLE 2 —COMPARISON OF THE NUMBER OF MEMBERS INSURED IN 1937 1938 1939 AND 1940 AND THE NUMBER OF MEMBERS IN THE COUNTY SOCIETIES AND THE PERCENTAGE OF INSURED MEMBERS\*

	1937			1938			1939			1940		
	A	B	C	A	B	C	A	B	C	A	B	C
Albany	276	155	56	285	159	56	298	166	56	301	182	60
Allegany	34	12	32	31	12	40	33	12	30	38	14	37
Bronx	1 151	478	42	1 238	500	40	1 324	503	37	1 364	512	38
Broome	183	98	54	191	100	52	219	98	45	194	101	52
Cattaraugus	58	30	52	59	29	49	63	29	46	62	33	53
Cayuga	61	43	70	61	44	72	63	45	71	70	46	66
Chautauquas	94	58	60	96	57	60	103	56	54	101	57	56
Chemung	70	48	61	74	43	58	83	50	60	86	52	60
Chemango	32	17	53	32	17	53	37	20	54	35	19	54
Clinton	29	19	66	35	24	69	37	22	60	40	26	65
Columbia	38	9	24	36	9	25	38	8	21	41	10	24
Cortland	32	14	44	29	16	55	28	12	43	29	11	38
Delaware	31	14	45	30	16	53	28	17	61	30	16	53
Dutchess	162	24	15	172	25	15	174	30	17	183	36	20
Erse	840	309	37	857	298	35	894	305	34	895	328	37
Essex	29	13	45	28	13	46	29	13	45	26	15	58
Franklin	52	25	48	53	24	45	60	21	35	63	29	46
Fulton	49	27	55	52	29	66	54	34	63	55	32	58
Genesee	29	14	48	34	17	50	35	20	57	37	21	57
Greene	31	21	68	33	21	64	34	19	56	34	20	69
Herkimer	46	29	68	41	32	60	52	33	63	52	35	67
Jefferson	86	47	53	94	55	58	94	47	50	92	50	54
Kings	2 452	1 142	47	2 674	1 169	43	2 814	1 160	41	2 867	1 184	41
Lewis	16	9	56	15	10	67	16	8	50	14	7	50
Livingston	45	15	33	46	15	33	47	12	26	48	14	29
Madison	39	20	51	39	17	43	41	17	41	43	21	49
Monroe	471	255	54	473	255	54	506	257	51	521	263	50
Montgomery	62	11	21	55	13	24	57	12	21	60	13	22
Nassau	299	185	62	348	205	59	378	218	58	404	236	58
New York	4 411	2 334	53	4 716	2 479	54	4 980	2 467	50	5 103	2 535	50
Niagara	121	60	50	124	58	47	134	59	44	136	64	47
Oneida	216	106	49	211	107	51	232	105	45	240	115	51
Onondaga	348	201	58	365	209	57	383	209	55	402	220	55
Ontario	82	39	48	86	41	48	89	39	44	81	37	46
Orange	141	95	67	155	100	65	149	95	64	163	99	61
Orleans	18	6	33	21	6	29	22	5	23	24	8	33
Oswego	53	34	64	49	33	67	56	36	64	52	32	62
Otsego	53	28	49	53	30	57	63	27	43	64	35	55
Putnam	14	7	50	15	6	40	15	6	40	16	5	31
Queens	789	391	53	839	401	48	901	425	46	990	463	47
Rensselaer	108	54	50	119	55	46	129	59	46	132	67	51
Richmond	114	44	39	122	46	38	132	47	36	134	52	39
Rockland	71	35	49	77	34	44	83	33	40	91	36	40
St. Lawrence	69	24	35	67	28	42	73	27	37	75	29	39
Saratoga	80	35	58	65	39	60	71	38	53	70	38	51
Schenectady	131	80	61	137	84	61	145	87	60	151	82	54
Schoharie	19	12	63	18	13	72	19	14	74	21	10	76
Schuyler	10	4	10	10	2	20	12	2	17	12	2	17
Seneca	27	12	44	20	12	41	31	12	39	26	12	43
Steuben	68	44	65	74	46	62	81	48	59	81	47	58
Suffolk	180	99	55	203	103	51	223	109	49	227	114	50
Sullivan	46	28	61	48	31	67	47	26	55	54	24	44
Tioga	27	11	41	28	12	43	30	12	40	32	13	41
Tompkins	63	36	57	64	33	52	70	36	51	73	34	47
Ulster	76	29	38	81	27	33	79	25	32	80	28	35
Warren	60	26	43	58	27	47	63	27	43	64	28	44
Washington	37	13	35	40	15	38	41	15	37	40	15	38
Wayne	56	25	45	56	24	43	57	24	42	63	28	44
Westchester	584	336	58	608	365	60	640	370	58	683	392	57
Wyoming	35	10	39	30	12	40	32	14	44	32	14	44
Yates	21	17	81	20	17	85	22	14	64	24	16	67
	14,866	7 412	60	15 799	7 719	49	16 743	7 756	46	17,224	8 081	47

\* A—number of members in county society B—number of members insured C—percentage insured.

Ignited by Cautery Operation upon Breasts, Expert Testimony—Osteopathic Physician as Witness Claimed Injury to Eyes Burn Sustained During Operation, Absence of Physician at Beginning of Delivery Alleged Improper Administration of Barbiturates, Retained Secundines

It is pleasing for your Counsel to learn from the members of your Society throughout the state that they enjoy reading these reports and articles and that they find them to be interesting and instructive

In addition to his other duties your Counsel receives frequent requests for opinions orally and in writing, on various topics Some of the matters upon which advice has been given (in writing) are the following

1 Inquiry from a physician specializing in

pathology as to (1) legal responsibility for negligence of technicians subordinate to him in connection with work at a private laboratory (2) his liability for his personal negligence in making a diagnosis (3) the liability of a city hospital for the pathologist's personal negligence and (4) the liability of an individual employing him as director of a private pathology laboratory

2 Request by a physician, a member of the board of directors of a hospital, for information with respect to legal responsibility of the hospital for malpractice committed within the hospital, with particular reference to the hospital's liability for permitting a physician with limited surgical experience to operate

3 Inquiry from the secretary of a county medical society as to the propriety of staff

TABLE 1—COMPARISON OF THE NUMBER OF SUITS INSTITUTED AND DISPOSED OF IN 1938-1939 AND 1939-1940

	Instituted		Disposed of	
	1938-1939 (12 months)	1939-1940 (12 months)	1938-1939 (12 months)	1939-1940 (12 months)
1 Fractures etc.	22	16	19	14
2 Obstetrics etc.	13	11	20	15
3 Amputations	3	3	3	1
4 Burns x rays etc.	22	19	33	32
5 Operations abdominal eye tonsil ear etc.	41	49	52	52
6 Needles breaking	2	2	2	3
7 Infections	12	16	19	10
8 Eye infections	5	4	4	2
9 Diagnosis	17	24	24	22
10 Lunacy commitments	1	2	2	3
11 Unclassified—medical	39	24	51	37
Totals	177	170	229	191
<i>Further Comparisons</i>				
Actions for death	17	16	26	22
Infants actions	23	16	27	20
Totals	40	31	53	42
<i>How Disposed of</i>				
Settled			55	50
Judgment for defendant			168	138
Judgment for plaintiff			6	3
Totals			229	191
<i>Further Comparisons</i>				
Appeals			4	3
Judgments for defendant				1
Judgments for plaintiff				
Pending on January 31 1939	441			
Pending on January 31 1940	420			

have both done magnificent work Mr Martin's reputation in the defense of malpractice actions is well and favorably known throughout the whole state In the twelve years that he has been engaged in this work he has come to grips in a practical way with every sort of a medicolegal problem His experiences in this field have won for him expressions of the highest approval from judges, lawyers, and doctors in all parts of the state, not only for his exceptional ability as an advocate but for his fine personal qualities as well

I cannot commend too highly the splendid work of Mr Clearwater, who for many years has had close contact with the members of your Society and with its officers and committeemen Mr Clearwater is a gentleman of exceptional ability and character and your Counsel feels fortunate indeed to have the benefit of his services as one of his associates

We cannot leave this subject without paying tribute to the splendid spirit of industry, loyalty, and devotion manifested by your Counsel's entire staff, both legal and clerical

With this preliminary statement we note that there were commenced in the present reporting period 170 cases as against 177 last year These figures, of course, do not include a number of claims outstanding in which suit may ultimately be brought Of equal importance with the actual work of litigation is the preventative work done by your Counsel and his office staff Throughout the year we are in consultation with many claimants and their attorneys and frequently we have been successful in demonstrating to them in fact and in law that no valid claim exists Thus the claims never reach a suit stage

Table 1 shows that during the present reporting period we disposed of 191 cases as against 229 disposed of during the previous reporting period, 50 of these cases were settled, and of

the balance 138 cases were successfully terminated in favor of the physicians, 3 cases resulted in judgment in favor of the plaintiff as opposed to 6 verdicts for the plaintiff in the prior reporting period In the cases in the appellate courts we were successful in three instances

We note from Table 1 that there were pending as of January 31, 1940, 420 cases as against 441 cases pending January 31, 1939

Table 2 gives a comparison of the number of members insured in 1937, 1938, 1939, and 1940, the number of members in the county societies, and the percentage of insured members in the county societies and in the entire State Society

**Counsel Work.** During the period of this report your Counsel prepared for the Society's JOURNAL articles in the nature of editorial comment These articles have included the following

Malpractice—Failure of Proof in Fracture Case, Physicians and Surgeons—Fee for Professional Services, An Unlicensed Practitioner of Medicine on Trial for Manslaughter, Licensing of Foreign Physicians, A Physician's Fee, Malpractice—Expert Testimony Required, Malpractice—Bad Result Not Proof of Negligence, Advertising by Professional Men, Death Action—Measure of Damages, Insurance—Permanent Disability, Malpractice—Plaintiff's Burden of Proof, Two Interesting Wills

Your Counsel has also digested case reports upon malpractice actions which were felt to be of special interest to the members of the profession These have been published in the State JOURNAL The case reports which were published during the previous year were as follows

Removal of Superfluous Hairs, Treatment of Potts' Fracture, Treatment of Obesity, Treatment of Injury to Hand, Claimed Burn Following Treatment of Acne, Claim of Malpractice in an Obstetric Case, Anesthesia Death, Case

county welfare officer to furnish medical care to relief patients at a flat rate for each person on relief, regardless of the amount of medical services required by each such individual

35 Inquiry from a physician as to whether it is legal and ethical for physicians to practice their profession as co-partners

36 Inquiry from an official for advice with respect to a situation in which it was claimed that a hospital advertised and held itself out as engaged in the actual practice of medicine.

37 Inquiry from a county medical society as to the power of the administrative authority of a hospital to make and enforce regulations covering conduct of physicians on its staff

**Other Counsel Activities** Your Counsel acting with the Committee on Bylaws examined various proposed amendments to the Constitution and Bylaws of the State Society and of a number of component county societies, and has rendered advice and made suggestions in connection therewith.

Your Counsel has been in conference and consultation with Dr Harry Aranow and Dr David Kaliski in connection with the operation of the Workmen's Compensation Law

Mr Clearwater, the attorney for the Society, has been in consultation with the Joint Committee on Medical Jurisprudence to cooperate with the Special Committee of the Bar Association, and has attended a number of meetings of the Bar Association in connection therewith

Your Counsel was a member of the committee appointed by the president to review the suggested change in office space, and made certain recommendations in connection with the lease that was finally entered into by the Society for the space at 292 Madison Avenue in the City of New York.

Your Counsel also drew the contract of Dr Joseph Lawrence, the executive officer of the

Society He also advised on the advertising matter between the Society and Mr Kent Lighty

Your Counsel attended and participated in two hearings of the Board of Censors in which appeals from disciplinary measures of two component county societies were heard and determined

Your Counsel has given legal advice at various times to various committeemen of the State Society

In addition to the above your Counsel is constantly in communication with Dr Peter Irving, secretary and general manager of the Medical Society of the State of New York with regard to many legal questions which arise almost daily in connection with his work

Also it should be noted that daily telephone calls from members of the Society come to your Counsel and his office staff, which require advice and assistance on various problems in connection with the members' practice. Many of these telephone inquiries present emergency situations that cannot be handled by correspondence.

**Legislative Advice and Activities** At the writing of this report the legislature has been in session only about a month

Your Counsel's associate, Mr Clearwater, attended the annual conference of county society legislative chairmen held at Albany, and your Counsel has examined and given advice with respect to some bills which have thus far been introduced affecting the medical profession

**Conclusion** To the many members of your Society who have assisted us in the defense of malpractice actions in court and in consultation, we record our grateful thanks and deep appreciation. Without this assistance so generously given we could not have obtained the results shown in this report.

Respectfully submitted,  
LORENZ J BROSNAN, Counsel

## Amendments to Constitution and Bylaws

### To the House of Delegates, Gentlemen

At your last meeting there were considered two separate amendments to the Constitution and Bylaws which were placed on the table for action at the 1940 session. These will not go to reference committees but to you as a whole. It is earnestly requested that each and every member digest these in advance and be prepared for discussion. Under the present bylaws "the affirmative vote of two-thirds of the House of Delegates present and voting shall be necessary for adoption."

The first of these amendments is directed toward the cooperation of county and state societies in various matters of organization policy

The second is directed toward a return from the present structural fifteen-man administrative setup of council with its own small committees to the former machinery of council and standing committees The various articles and bylaws proposed are printed on this and following pages

JAMES M FLYNN, M D, *Speaker*  
PETER IRVING, M D *Secretary*

### First Amendment

#### Bylaws

#### Chapter XV—Component County Medical Societies

Amend by adding a new Section 7 to read

"The component County Medical Societies their officers or committeemen, shall not initiate or participate in any activities, outside of the structure of the Medical Society of the State of New York, which are contrary to the policies of the Medical Society of the State of New York, as expressed by the actions or in resolutions of the House of Delegates or its authorized representative bodies No member shall in any public paper, discussion, or hearing hold himself by direct statement or implication as representing the Medical Society of the State of New York, or any component County Medical Society, unless he shall actually have been so authorized by such Society, or a legally constituted representative board or committee of same having the power to confer such authority "



physicians of a state hospital for the insane engaging in private practice.

4 Inquiry from a physician as to (1) fire laws with respect to the preservation and filing of x-ray films in hospitals and private offices and (2) as to legal requirements with respect to the use of safety x-ray films

5 Request from a physician associated as superintendent with a state hospital for the care of tubercular patients concerning his official responsibility and the responsibility of the state in actions for malpractice

6 Inquiry from a physician as to the ethical situation involved in fixing his fee for expert testimony in connection with a personal injury action instituted by a patient

7 Inquiry from a physician who had attended a woman during her delivery as to the advisability of informing the patient's husband of the happening of an accident of which the patient was not aware, during the course of the delivery, involving possible injury to the newborn child

8 Request for advice from a plastic surgeon as to the proper method of obtaining consents from patients for exhibition of lantern slides and motion pictures showing before and after likenesses of patients and also pictures of the operations performed

9 Request from several different physicians for forms of operative consents to be signed by a patient prior to the performance of a plastic surgery operation in order to attempt to prevent an action based upon alleged breach of contract or guarantee

10 Inquiry from a physician who had obtained from a female patient a history of having acquired a venereal disease prior to marriage as to the extent to which he was properly entitled to testify as a witness in a suit for divorce brought by the husband on the grounds that she had married him concealing from him her knowledge of the venereal disease

11 Inquiry from a physician associated with a hospital as a member of the attending staff as to his liability and the hospital's liability for the negligent acts of an intern in treating a patient on his service

12 Inquiry from the secretary of a county medical society as to the rights of a physician executing a birth certificate of a child known by him to be illegitimate

13 Request from a physician employed by a railroad and other corporations to make physical examinations of applicants for employment as to his rights to reveal the results of Wassermann tests

14 Inquiry from a physician as to the legal rights of a patient to bring suit against a druggist and himself resulting from the improper compounding of a prescription issued by the physician.

15 Inquiry from a physician as to the scope of a consent to a postmortem examination of a body

16 Request from secretary of a county medical society for advice as to the extent to which a patient is entitled to require a physician to detail specifically a bill for professional services

17 Inquiry from a physician concerning the ownership of x-rays

18 Inquiry from a physician as to whether he could be held liable in a malpractice action or an action based upon breach of contract for his acts in assisting a surgeon in performing an operation upon the latter's private patient without fee

19 Inquiry from a county medical society as to the method by which such society is entitled to incorporate under the Membership Corporation Law

20 Inquiry as to the legal consequences of various methods of labeling drug containers

21 Inquiry as to statute relating to the responsibility of municipalities for the malpractice of physicians

22 Inquiry as to whether it is legal for a county medical society to make full citizenship a requirement for membership

23 Inquiry from a physician engaged as director of a philanthropic hospital as to the liability in malpractice actions of said institution, as to the liability of a resident physician for his individual malpractice, and the liability of members of the board of directors for acts of the employees of the institution

24 Inquiry from an officer of a county medical society as to the interpretation of the new provisions of the insurance law covering medical expense indemnity insurance

25 Inquiry from physician as to the extent to which the county welfare commissioner is empowered to make rules and regulations with respect to the rendering of medical care to welfare patients

26 Request from a physician, superintendent of a hospital, for a form of waiver to be signed by patients prior to the administration of x-ray treatment to avoid damage suits arising out of possible injuries resulting from said x-ray treatment

27 Inquiry as to the right and duty to operate upon a pregnant woman who has died in an attempt to save the life of her unborn child

28 Inquiry from a physician as to the legal effects of associating and practicing with an unlicensed refugee physician

29 Inquiry from a physician as to the right of a patient involved in an action for personal injuries to require the physician to change certain details of the physician's record of the care he rendered to the patient

30 Inquiry from the secretary of a county medical society as to whether membership in the Medical Society of the State of New York is a necessary qualification for a medical appointment under the Civil Service Law

31 Inquiry as to the extent to which a physician has the right to furnish information to a representative of an insurance company concerning the condition of a patient treated by him

32 Inquiries from county medical societies concerning the interpretation of the phrase 'moral turpitude' in connection with disciplinary action against a member

33 Inquiry from a physician as to the right of a physician to disclose confidential information in connection with the care of welfare cases

34 Inquiry from a county medical society as to the legality and propriety of said society in entering into an arrangement with the

### CHAPTER IV Council

Sec. 1 The Council shall meet at the close of the annual meeting of the House of Delegates. The members of the Council shall hold office until their successors are duly elected and qualified.

Sec. 2 It shall meet twice a year, the time and place to be selected by the President, and it shall meet at other times upon the request in writing of five members of the Council, or upon the call of the President.

Sec. 3 A quorum shall consist of eleven members.

Sec. 4 The council shall be the executive and administrative body of the Society and shall control all arrangements for the annual meeting, shall elect an Executive Committee of the Council to carry on during the interim between the regular meetings of the Council the affairs and the business of the Society. Its action shall be governed by the Constitution and Bylaws of the Society and the rules and regulations of the House of Delegates. It shall have power to employ legal counsel.

Sec. 5 The Council shall take such action as is necessary to carry out the Constitution and Bylaws and to give full effect to any resolution or vote for the House of Delegates. It shall also have power to legislate as a House of Delegates, when the latter is not in session, on all matters consistent with the Constitution and Bylaws. Such legislative action of the Council shall not become effective or binding on the Society until approved by a majority of a referendum vote of the House of Delegates, provided a majority of the House of Delegates vote thereon within fifteen days after the mailing of the question submitted for referendum. The Secretary shall send the question for referendum vote to all the members of the House of Delegates.

The Council shall have power to fill any vacancies which may occur in any elective office not otherwise provided for, until the next annual meeting of the House of Delegates.

Sec. 6 The following shall be the order of business at meetings of the Council:

- 1 Calling the meeting to order
- 2 Roll call by the Secretary
- 3 Reading of minutes
- 4 Communications
- 5 Reports of chairmen of standing and special committees
- 6 Unfinished business
- 7 New business

### Chapter V—Executive Committee

That a new chapter reading as follows be inserted to follow the present Chapter IV to become Chapter V" entitled "Executive Committee."

#### CHAPTER V Executive Committee

Sec. 1 At its first regular meeting the Council shall choose by a majority vote five members of the Council three of whom shall be Councilors, who together with the President, the President-Elect, the Secretary, the Treasurer and the immediate Past-President shall constitute the Executive Committee. Candi-

dates for election to the Executive Committee shall be nominated by the President, but other candidates may be nominated by any member of the Council. The Executive Committee shall hold office until the following annual meeting of the Council or until their successors shall be duly chosen. The Executive Committee shall, when elected, organize immediately under the chairmanship of the President of the Society and proceed to elect a Vice-Chairman. The Executive Committee shall hold regular meetings at times and places that shall be fixed by the Chairman, and any two members of the Executive Committee may require the Chairman thereof to call a meeting for such time and place as shall be designated by them in writing, of which the members shall have at least two days' notice. Five members shall constitute a quorum. It shall prepare a budget to be acted upon by the Board of Trustees.

Sec. 2 The following shall be the order of business at meetings of the Executive Committee:

- 1 Calling the meeting to order
- 2 Roll call.
- 3 Reading of minutes
- 4 Communications
- 5 Reports of committees
- 6 Unfinished business
- 7 New business

Sec. 3 The Executive Committee shall superintend all publications of the Society and their distribution and shall have authority to appoint a Publication Committee, and Editor and such assistants as it may deem necessary and provide for the publication of official pronouncements of component county societies when requested by said society. The Standing and Special Committees of the Society shall report to the Executive Committee and shall be subject to the jurisdiction of the Council or the Executive Committee when the House of Delegates is not in session. No Standing or Special Committee shall inaugurate or initiate any policy or commit the Society to any policy unless the same has been expressly approved by the House of Delegates, and/or the Council and/or the Executive Committee. The Executive Committee shall have such other powers and duties as may be delegated to it from time to time by the Council. It shall act as adviser to the legal counsel of the Society in suits brought against members of the Society for alleged malpractice. It shall with the aid of the legal counsel, examine the Constitution and Bylaws of component County Societies and District Branches and all amendments thereto which may be submitted to the Council for approval, and shall report to the Council its approval or disapproval thereof. The Chairman of the Executive Committee may order, or any two members of the Committee may require the Chairman to order, a referendum vote of the Council on any question that may come before the Executive Committee and members of the Council may vote thereon by mail, telegram, or telephone. The poll on the question so submitted shall be closed at the expiration of one week after the mailing of the question and if the members of the Council voting shall

## Second Amendment Constitution

### Article IV—Council

That Article IV be deleted and the following substituted

"The Council shall be composed of (a) officers of the Society (b) chairmen of the standing Committees, (c) the retiring President for a term of one year after his term of office expires "

### Article V—Officers

That Article V be amended by adding after the word "Delegates," "five Trustees and one Councilor from each District Branch, who shall be the President thereof", and that the last sentence of the present Article V be deleted and the following substituted therefor

"The officers shall take office at the termination of the annual meeting at which they were elected with the exception of the Councilors elected by the District Branches, who shall take office at the termination of the next annual meeting of the State Society "

That the Bylaws of the Medical Society of the State of New York be amended to read as follows

## Bylaws

### Chapter II—Section 1

That Section 1 (c) be amended by deleting the first sentence, to wit "the Presidents of the District Branches sitting as District Delegates" and adding a new subparagraph "(d) the chairmen of Standing Committees" Section 1 will then read as follows

Sec 1 The House of Delegates shall be composed of (a) Delegates elected by the component County Medical Societies, (b) Officers of the Society and other members of the Council and of the Board of Trustees, (c) Past-Presidents of the Society shall be life members of the House of Delegates, and (d) the chairmen of Standing Committees Each component County Society shall be entitled to elect as many delegates as there shall be State Assembly Districts in such County at the time of the election, but each component County Medical Society shall be entitled to elect at least one delegate. A component Society representing by its name more than one County shall be entitled to as many delegates as there are Assembly Districts in the Counties named in the title of such Society

That Section 8 be amended by changing item 12 to read "Reports of the Councilors," item 13 to read "Reports of the Standing Committees," and renumbering the balance of the section Section 8 will then read as follows

Sec 8 The following shall be the order of business at sessions of the House of Delegates

- 1 Calling the meeting to order
- 2 Report of Reference Committee on Credentials
- 3 Roll call by the Secretary
- 4 Reading the minutes of the previous meeting
- 5 Report of the President
- 6 Address by the President-Elect
- 7 Report of the Board of Censors

- 8 Report of the Council
- 9 Report of the Secretary
- 10 Report of the Treasurer
- 11 Report of the Board of Trustees.
- 12 Reports of the Councilors
- 13 Reports of the Standing Committees.
- 14 Reports of the Special Committees
- 15 Reports of Reference Committees
- 16 Unfinished business
- 17 New business
- 18 Adjournment.

### Chapter III

That Chapter III, Section 1 be amended by deleting the following words in the first sentence, "members of the Council" and substituting therefor, "chairmen of Standing Committees" Section 1 will then read as follows

Sec 1 The Officers, chairmen of Standing Committees, and the Board of Trustees of the Society, and the Delegates to the American Medical Association shall be elected as the first business of the second day's session of the annual meeting of the House of Delegates No member of the Society who is in arrears for county dues or State Society per capita assessment shall be eligible for any office or entitled to vote for any officer, member of the Council, trustee, or delegate.

That Section 2 be amended by adding after the words "Vice-Speaker of the House of Delegates" the words "chairmen of Standing Committees" and that the last paragraph of said Section 2, beginning with the words "Three members" and ending with the words "unexpired term" be deleted Section 2 will then read as follows

Sec 2 The President, the President-Elect, who shall serve as first Vice-President, the second Vice-President, the Secretary, the Assistant Secretary, the Treasurer, the Assistant Treasurer, the Speaker and the Vice-Speaker of the House of Delegates, and chairmen of Standing Committees shall be elected for one year or until their successors have been duly chosen

That Section 4 be amended by deleting the following words in the first sentence, "other members of the Council" and the following substituted therefor, "chairmen of Standing Committees" Section 4 will then read as follows

Sec 4 The first order of business on the second day of the session of the House of Delegates of each annual meeting shall be the nominations for officers of the Society and chairmen of Standing Committees, a member of the Board of Trustees, delegates to the American Medical Association, and the appointment of a sufficient number of tellers by the Speaker After all nominations have been made the Secretary shall cause to be displayed in full sight of the delegates a list of nominees for each office arranged in alphabetical order, and shall also cause to be distributed a sufficient number of blank ballots for the use of the House of Delegates These ballots shall have printed or stamped thereon the appropriate headings for each office with spaces thereunder in which may be written the name of the candidate or candidates to be voted for

### Chapter IV—Council

That the present Chapter IV be deleted and the following substituted therefor

the profession in each county in his district and shall report thereon to the House of Delegates

That a new chapter to be entitled "Chapter VIII" be interpolated between the present Chapter VII and Chapter IX and to read as follows

#### CHAPTER VIII *Committees*

Sec. 1 The Committees shall be classified as Standing, Reference, and Special Committees Standing and Special Committees shall report to the Council and/or the Executive Committee and/or the House of Delegates

Committee on Scientific Work

Committee on Legislation.

Committee on Public Health and Medical Education.

Committee on Economics and Public Relations

Committee on Arrangements

Sec. 2 The Committee on Scientific Work shall consist of the Chairman, a member to be nominated by the President of the Society and elected by the Council, and the Chairmen of the different sections It shall hold meetings and prepare the necessary programs for the annual meeting of the Society and for such other special meetings as may be designated by the House of Delegates It shall forward programs in ample time for publication, and not later than thirty days before the annual session shall send a completed program to the Secretary for the printing of the final program

Sec 3 The Committee on Legislation shall consist of five members including the Chairman. It shall be the representative of the Society on all matters of medical legislation and shall have charge of all hearings before the Committees of the Legislature The component county societies and their committees on legislation shall cooperate with this Committee and act in harmony with it on all such matters It shall keep in touch with professional and public opinion on matters relating to medical legislation. It shall represent the Society in procuring the enactment of the medical laws of the State, in the interest of public health and of scientific medicine as will best secure and promote the welfare of the whole people It shall take all legal and honorable means of opposing and preventing all vicious legislation detrimental to the best interests of the profession and the welfare of the public.

Sec 4 The Committee on Public Health and Medical Education shall consist of five members including the Chairman It shall be the function of this Committee to investigate, study, and report to the House of Delegates on matters of public health, preventive medicine, and medical education It shall gather facts regarding the activities of health organizations, both official and nonofficial, and report to the House of Delegates regarding the same when it so deems necessary It shall be the duty of this Committee to advise the House of Delegates as to plans for postgraduate education for the general profession and shall be in charge of carrying out such plans as are approved by the House of Delegates It shall cooperate with similar committees of com-

ponent county societies in carrying out recommendations of the House of Delegates dealing with public health and medical education.

Sec 5 The Committee on Economics and Public Relations shall consist of five members, including the Chairman The function of this Committee shall be to conduct investigations, to gather facts, to make studies or surveys on the general subject of the relationship of the physician individually and collectively with the public It shall receive matters of general public information and study them both in regard to their effect upon the practice of medicine in private or institutional work. It shall concern itself with the financial aspects of the practice of medicine, throughout the State of New York, especially insofar as it affects the efficiency of medical service to the public It shall concern itself with all economic phases regarding the practice of medicine in hospitals private or public clinics, commercial organizations, and other institutions established for diagnosis and treatment.

Sec 6 The Committee on Arrangements shall consist of nine members including the Chairman. It shall provide suitable accommodations for the meeting places of the Society, the House of Delegates, and the Sections and shall make all necessary arrangements for these meetings The Chairman of the Committee shall send an outline of the arrangements to the Secretary for publication in the program, and shall make such announcements during the session as occasion may require

Sec 7 The Chairman of all Standing Committees shall be elected by the House of Delegates unless otherwise provided for in the By-laws The remaining members shall be elected by the Council

#### *Reference Committees*

Sec 8 At least one month before the meeting of the House of Delegates the Speaker shall appoint such Reference Committees as he shall deem expedient for the purposes of the meeting Immediately after the organization of the House of Delegates he shall formally announce the appointments to the Committees Only members of the House of Delegates are eligible for appointment on the Reference Committees Such Committees shall consist of five members, three members constituting a quorum, and shall serve during the meeting at which they are appointed

Sec 9 Reports of Officers and Standing Committees shall be printed at least one month before the meeting of the House of Delegates and sent to the members of the Reference Committee appointed according to Section 9, for their preliminary consideration. All recommendations, resolutions, measures, and propositions presented to the House of Delegates and which have been duly seconded shall be referred by the Speaker to the appropriate Reference Committee

Sec 10 Each Reference Committee shall, as soon as possible, take up and consider such business as may have been referred to it and shall report when called upon to do so

comprise a majority of all the members of the Council, a majority of such vote shall determine the question and be binding upon the Council and the Executive Committee.

Sec 4 In case of any vacancy in the Executive Committee through death, resignation, disqualification, or other cause, the Chairman shall appoint a successor to fill such vacancy until the next meeting of the Council

Sec 5 The Executive Committee shall have charge of the administrative and business affairs of the Society while the Council is not in session, and may adopt rules and regulations in conformity with the Constitution and Bylaws of the Society or to the rules, regulations, or orders of the House of Delegates or of the Council

### Other Changes

That the present Chapter V (Board of Trustees) be renumbered to become Chapter VI

That the present Chapter VI (Censors) become Chapter IX

That the present Chapter VII be deleted and the following substituted therefor

### CHAPTER VII

#### *Duties of Officers*

Sec. 1 The President shall preside at all meetings of the Society, the Council, and the Censors He shall be Chairman of the Executive Committee He shall be ex-officio member of the Board of Trustees and of all committees He shall appoint all committees not otherwise provided for He shall deliver an address at the annual meeting of the Society He shall perform such other duties as the House of Delegates or the Council shall require. He shall not accept any civic or public duties without the advice and consent of the Council

Sec 2 The ranking Vice-President in the absence of the President shall perform the duties of such officer In the event of the President's death, resignation, removal, incapacity, or refusal to act, the ranking Vice-President shall succeed him

Sec 3 The President-Elect shall perform no specific duties other than those of a member of the Council and the Executive Committee He shall not accept any civic or public duties without the advice and consent of the Council

Sec 4 The Speaker shall preside at all meetings of the House of Delegates He shall appoint all parliamentary committees serving during the meeting of the House of Delegates

Sec 5 The Vice-Speaker shall perform the duties of the Speaker when requested by the Speaker to do so, or in case of the absence, death, resignation, or refusal of the Speaker to act.

Sec 6 The Secretary shall attend all meetings of the Society, the House of Delegates, the Council, Board of Trustees, the Executive Committee of the Council and the Censors, and shall keep minutes of their respective proceedings in separate records He shall be responsible for and have general charge of the Society's offices and the employees therein. He shall be the custodian of the seal of the

Society, and of all books of records and papers belonging to the Society, except such as properly belong to the Treasurer, and shall keep an account of, and promptly turn over to the Treasurer, all funds of the Society which come into his hands He shall provide for the registration of the members at all sessions of the Society With the aid and cooperation of the secretaries of the county societies, he shall keep a proper register of all the registered physicians of the State by counties He shall aid the Councilors in the organization and improvement of the county societies and the extension of the power and influence of the Society He shall conduct the official correspondence, notifying members of meetings, officers of their election, and committees of their appointment and duties He shall affix the seal of the Society to all credentials issued to members of the Society elected by the House of Delegates and to such other papers and documents as may require the same. He shall make an annual report to the House of Delegates and also the reports of the Council and the Board of Censors He shall supply each county society with the necessary blanks for making their annual reports to this Society Acting in cooperation with the Committee on Scientific Work he shall prepare and issue all programs He shall be ex-officio a member of all standing committees He shall record the name and date of admission of each member of the Society

Sec. 7 The Assistant Secretary shall aid the Secretary in the work of his office and in the absence or disability of the latter, he shall perform the duties of the office until the Secretary resumes the work, or in case of a vacancy until a successor shall be elected He shall be entitled to all the rights and privileges of the office while acting as Secretary

Sec 8 The Treasurer shall keep accurate books of accounts of all moneys of the Society which he may receive, and shall disburse the same when duly authorized by the Board of Trustees, but all checks drawn by the Treasurer upon the funds of the Society shall be countersigned by the Secretary of the Society He shall collect, on or before the first day of June in each year, from the Treasurer of each component county society the State per capita assessment He shall, at the expense of the Society, give a bond for the faithful performance of his duties, which shall be approved by the Board of Trustees as to amount, form, and surety He shall make an annual report to the House of Delegates and, whenever requested, to the Board of Trustees

Sec 9 The Assistant Treasurer shall aid the Treasurer in the work of his office, and in the absence or disability of the latter, he shall perform the duties of the office until the Treasurer resumes the work, or in case of a vacancy until a successor shall be elected He shall, at the expense of the Society, give a bond for the faithful performance of his duties which shall be approved by the Board of Trustees as to the amount, form and surety He shall be entitled to all the rights and privileges of the office while acting as Treasurer

Sec 10 Each District Councilor shall visit the counties of his district at least once a year and make a careful inquiry of the condition of

3 "Medical Management Including Sanatorium Care," by Dr James C Walsh with discussion by Dr Edwin P Kolb

4. Surgical Methods in Tuberculosis (a) "The Use of Phrenic Nerve Operations," by Dr Edwin J Grace (b) "The Use of Pneumolysis," by Dr Peter Amazon (c) "Thoracoplasty and Its Modifications," by Dr Carl A Hettesheimer Discussion was by Dr John E Jennings

There was an all-day exhibit on the pathology and roentgenography of tuberculosis and neoplasms of the chest under the chairmanship of Dr Theodore J Curphey Pathologists and roentgenologists of the various hospitals in the four counties participated in the exhibit, and our thanks are due to them and to the physicians who presented papers

Between the morning and afternoon sessions a luncheon was held which was attended by 176 physicians and members of the women's auxiliaries of the four county societies composing the branch Dr Terry M Townsend, president of the State Society, addressed the gathering In the afternoon the members of the auxiliaries held a meeting which was addressed by Dr

Joseph S Lawrence executive officer of the Medical Society of the State of New York

There were 170 physicians registered at the two symposiums and 104 members of the auxiliaries attended the joint meeting held by the ladies

Besides Dr Townsend, other officers of the State Society who honored us by their presence were Dr Peter Irving, secretary and general manager, and Dr Joseph S Lawrence, executive officer

The attendance was one of the best of any meeting of the branch and testified to the importance of the branch in the professional life of the four counties of Long Island

Thanks are also due to Dr Lawrence, who handled the registration, to Dr Thomson, who handled all the business details, and to Mrs Luther H Kice, who arranged the auxiliary meeting which added so much to the success of the day

Respectfully submitted,

LOUIS H BAUER, M D, *President*

February 26, 1940

### Report of the Third District Branch

#### *To the House of Delegates, Gentlemen*

The officers of the Third District Branch of the Medical Society of the State of New York and the presidents of the component county medical societies met at the DeWitt Clinton Hotel, Albany, on May 22, 1939, to arrange for the annual meeting of the Third District Branch The meeting was well attended

The thirty-third annual meeting of the Third District Branch was held at Liberty, Sullivan County, on September 22 and 23, 1939 The scientific session was spread over the afternoon of September 22 and the morning of September 23, in fact the later session ran over until 2 00 P.M. because of the interest of those present A

total of seven pertinent subjects were presented by outstanding speakers During the evening of the first day an informal dinner and dance were held At the dinner, Dr Terry M Townsend, president of the Medical Society of the State of New York, gave a very timely address devoted to the question of regimentation of physicians A total of fifty-nine persons were registered at the various sessions, most of these were from the southern part of the District, however

Respectfully submitted,

ARTHUR M DICKINSON, M D, *President*  
October 28, 1939

### Report of the Fourth District Branch

#### *To the House of Delegates, Gentlemen*

The thirty-third annual meeting of the Fourth District Branch of the Medical Society of the State of New York was held at Ogdensburg on September 19 and 20, 1939

In spite of the fact that this district covers a large area extending along the northern boundary of the state and some members have to come a distance of two or three hundred miles to be present, our attendance was very gratifying

The meeting opened with a scientific session held in the auditorium of the Nurses' Home, A Barton Hepburn Hospital, at 2 00 P.M., September 19 At this session a skin clinic was held conducted by Dr John R Schermerhorn, of Schenectady Interesting cases were presented for diagnosis and treatment for the same outlined

A paper on Breech Delivery," illustrated by colored movies, was given by Dr Newell W Philpott, of Montreal, attending obstetrician, Royal Victoria Hospital This was freely discussed by members present

A third paper on "Head Injuries" followed, given by Dr Arthur R Elvidge, of Montreal McGill University

In the evening, members present were the guests of the St Lawrence County Medical Society at a dinner held at the Seymour House Ogdensburg, at which dinner Dr Grant C Madill presided as toastmaster Addresses were given by Dr Peter Irving, secretary, Dr Joseph S Lawrence, executive secretary, and Dr Terry M Townsend, president of the Medical Society of the State of New York

These addresses were followed by an illustrated lecture on "Greek Health Resorts in 500 B.C.," by Dr Emerson Crosby Kelly, of Albany

The scientific session was resumed at 10 00 A.M., September 20 A paper on "Carcinoma of the Colon" was presented by Dr Grant C Madill of Ogdensburg, chief surgeon, A Barton Hepburn Hospital This was followed by a paper on "Physician's Responsibility in Child Behavior Problems," by Dr Marvin Israel, of Buffalo, assistant pediatrician, Children's Hospital

After an interesting discussion of the two papers the annual meeting adjourned

Respectfully submitted,

S C CLEMANS, M D *President*  
October 31, 1939

### Special Committees

Sec 11 Special Committees may be created by the House of Delegates to perform the special functions for which they are created. They shall be appointed by the officer presiding over the meeting at which the committee is authorized, if such committee is to conclude its work during said meeting of the House of Delegates. The President shall appoint all other committees unless otherwise ordered by the House of Delegates.

Sec 12 A Special Committee on Prize Essays consisting of three members, including the Chairman, shall be appointed by the President. Its duty shall be to receive all essays offered in competition for prizes which may be offered by this Society. The Committee shall make all necessary rules and regulations for the award of prizes subject to the terms of the deeds of gift, and shall report the result at the next annual meeting of the House of Delegates. They shall give notice through the Society's publication or by other methods within thirty days after their appointment, of the amount of the prize and when the essays shall be submitted to the Committee.

Sec 13 Any member of the Society shall be eligible to serve on Standing or Special Committees. All members of committees, who are not members of the House of Delegates, shall have the right to present their reports in person to the House of Delegates and to participate in the debate thereon, but shall not have the right to vote.

Sec 14 Completion of Work In all

cases where certain work is being performed or problems studied by Standing or Special Committees, such work or study shall not be considered finished when the tenure of office of such Committee ends but shall be continued by the succeeding Committee.

That the present Chapter VIII (Direction of Activities) to become Chapter XII.

That the present Chapter IX (Meetings) be renumbered and become Chapter X.

That the present Chapter X (Expenses) be renumbered and become Chapter XI.

That the present Chapter XIII remain the same.

That Chapter XIV be amended to read as follows:

### CHAPTER XIV

#### District Branches

Sec 1 Each District Branch shall elect a President for two years who shall be the Councilor for that Branch.

Sec 2 Each District Branch shall elect such officers as are provided for in its Bylaws who shall attend the business meetings of the Branch.

That the present Chapter XV, Chapter XVI, Chapter XVII, and Chapter XVIII remain the same.

These amendments to the Bylaws will take effect at the termination of the Annual Meeting of the Medical Society of the State of New York in 1940.

March 15, 1940

## Report of the First District Branch

### To the House of Delegates, Gentlemen

The annual meeting of the First District Branch was held in New York City on October 11, 1939, and following the custom of the past few years, the program embraced demonstrations, lectures, and clinics in practically every branch of medicine and surgery.

Presbyterian Hospital Medical Center very kindly acted as host for the meeting.

I wish to take this opportunity to express my appreciation to Dr. Allen O. Whipple, Dr. W. W. Palmer, and the director and associates in the various departments of the hospital for their efforts in arranging a most interesting and educa-

tional day of postgraduate instruction for our members. Even the catering department took part, giving us a most appetizing lunch.

The attendance was the best we have had for several years, a total of 379 being registered. This I interpret as an expression of approval for this type of meeting.

As there was no election this year, no business meeting was held.

Respectfully submitted,

THEODORE WEST, M.D., President

October 20, 1939

## Report of the Second District Branch

### To the House of Delegates, Gentlemen

The annual meeting of the Second District Branch was held at the Garden City Hotel, Garden City, Long Island, on November 16, 1939. The scientific program was devoted to the chest.

In the morning there was a symposium on neoplasms of the chest under the chairmanship of Dr. Henry M. Moses. The following papers were given:

1 "Diagnosis by Laryngobronchoscopy," by Dr. Matthew G. Golden.

2 "X-Ray Diagnosis and Therapy," by Dr. Irving S. Startz.

3 "Differential Diagnosis Between Lung Tumors and Chronic Inflammatory Disease of

the Lungs," by Dr. Carl H. Greene and Dr. Raphael A. Bendove.

4 "Latency in Bronchogenic Carcinoma," by Dr. Alfred Angrist.

5 "Surgical Treatment of Bronchiectasis," by Dr. William H. Field.

The afternoon program was devoted to tuberculosis. The symposium was under the chairmanship of Dr. Charles E. Hamilton. The following papers were presented:

1 "Early Clinical Diagnosis," by Dr. Foster Murray, with discussion by Dr. Abraham Braunschtein.

2 "Correlation of Roentgen Ray with Clinical Findings," by Dr. Abraham H. Levy with discussion by Dr. Willard J. Davies.

The next paper was given by Dr Carl Eggers, F.A.C.S., clinical professor of surgery, New York University College of Medicine, Post Graduate Medical School, and Columbia University, New York City, a very able and interesting presentation of Carcinoma of the Esophagus, Stomach, Colon, and Rectum. Emphasis was laid on early diagnosis of these conditions, the importance of pre- and postoperative treatment was stressed. The present-day operative approach and the division of the operations into stages was described. The subject was illustrated with lantern slides.

Adjournment for lunch followed this paper.

The nominating committee reported immediately after lunch president, Dr George M McKenzie, Cooperstown, first vice-president, Dr Norman S Moore, Ithaca, second vice-president, Dr Charles S Pope, Binghamton, secretary, Dr Hubert B Marvin, Binghamton, treasurer, Dr William A Moulton, Candor.

Motion made, seconded, and carried that the report of the nominating committee be accepted and the candidates be declared elected.

Three of our guests spoke during the luncheon hour. Dr Terry M Townsend, of New York, president of the Medical Society of the State of New York, Dr Peter Irving, of New York, secretary and general manager, and Dr Thomas P Farmer, of Syracuse, chairman of the Public Health and Education Committee.

Dr Edward C Reifenstein, professor of medicine, Syracuse University, presented a very comprehensive paper on "Digitalis, Its Use and Abuse." Discussion was opened by Dr R L Hamilton, of Binghamton.

Dr George C Vogt presented the following resolution:

"WHEREAS The subject of medical indemn-

ity insurance has been and is being discussed and is being seriously considered for adoption by many county medical societies throughout the State, and

"WHEREAS The public is beginning to express its demand for such service, and

"WHEREAS The Sixth District Branch and its component medical societies believe that the State Medical Society should be the source of information for study, planning, and coordination on medical insurance in the State, Therefore

"BE IT RESOLVED That the Sixth District Branch and its component medical societies petition the Council of the Medical Society of the State of New York that at its next meeting it create a body or committee to advise and aid county medical societies or group or groups sponsored by them, on all aspects of the study, formation, and execution of plans on the subject of medical indemnity insurance."

Moved that this resolution be accepted placed on file, and a copy be sent to the State Society." The resolution was seconded and carried.

Dr Frederick M Miller, Sr., of Utica, has been working on a plan for medical indemnity insurance. He came and presented this plan to the society.

Dr Louis C Kress, of Buffalo, chairman of the New York State Cancer Committee, gave a short talk on the matter of reporting cases of cancer according to the new law.

Dr H I Johnson moved that a vote of thanks be given Dr Miller for his trip to Binghamton and the subject matter presented, and the meeting adjourned.

Respectfully submitted,

REBE B HOWLAND M D, President

February 19, 1940

## Report of the Seventh District Branch

### To the House of Delegates, Gentlemen

Since the activities of the officers and the members of the district branches are almost entirely confined to one meeting a year, this report necessarily concerns the annual meeting. The Medical Staff of United States Veterans Hospital at Canandaigua was host, and the meeting was held on Thursday, September 28, 1939, in the hospital auditorium.

A meeting of district officers and presidents of component medical societies was held about three months in advance of the meeting to make preliminary plans. A poll of county representatives indicated that most doctors prefer illustrated or animated presentations of medical subjects. They do not care for long, exhaustive addresses, and the subjects presented must be timely and authoritative. The committee believed that, regardless of the time of the meeting or the physical beauty of the surroundings, more doctors are attracted by a good program than anything else. The announcement of a meeting must be made in an attractive form so that when received in the mail the very first impression must make the doctor feel that he wants to attend the meeting. The announcement should be in such a form that it will not be lost among other pieces of mail. Preceding the time for the meeting, perhaps three or four weeks in advance, every newspaper in the district was

furnished with releases announcing the time and place and highlights of the program. It is a difficult matter to influence even 25 per cent of the members and this can be done only by means of thorough advertising and personal work on the part of the committee.

The presidents of the eight county societies in the district were asked to accept a quota of 25 per cent of their active membership, and most of them made good. There was a total attendance of 177. Ontario County, located in the center of the district, showed an attendance of 51 members, which is about 80 per cent of the membership. Monroe County, with an attendance of 43, was in second place.

It is believed that this large attendance was attracted by the following program which was carried out exactly as announced. We had the advantage of a splendid auditorium and the use of modern equipment for full size, commercial motion pictures and an adequate loud speaker system, making it easy for everyone to see and hear. Since the motion pictures were first on the program, it was possible to start promptly at 10 00 A.M., and it was known exactly how much time the motion pictures would require. The following list of medical subjects was presented "One Against the World" (Dr MacDowell, who performed the first major operation



## Report of the Fifth District Branch

### To the House of Delegates, Gentlemen

The thirty-third annual meeting of the Fifth District Branch of the Medical Society of the State of New York was held on Tuesday, September 26, 1939, at the Y M C A in Oswego. The meeting was called to order by the president, Dr Charles A Earl, at 10 30 A M, many of the members driving through rain and snow to get to the meeting. The morning program was as follows "Individualization of the Patient for Gallbladder Surgery," by Dr Sherman M Burns, Oswego, "Anesthesia in Minor Surgery" (motion pictures), by Dr Leon E Sutton, Syracuse, "Smallpox and Vaccination," by Dr A Clement Silverman, Syracuse, "The Use and Abuse of Digitals," by Dr Edward C Reifenstein, Syracuse.

Because of the absence of Dr Edgar O Boggs, Dr Frederick S Wetherell, of Syracuse, opened the discussion of Dr Burns's paper. Dr Sutton's paper was discussed by Dr Murray M Gardner and Dr Wetherell, both of whom emphasized points made by the speaker. Because of the shortness of time, discussion of Dr Silverman's paper by Dr J Frederick Rommel was omitted. The discussion of Dr Reifenstein's paper was opened by Dr Lee S Preston.

At the conclusion of the morning session the president appointed the following nominating committee: Dr A B Santry, of Little Falls, chairman, Dr Hyzer W Jones, of Utica, and Dr Leroy Hollis, of Lacona.

Luncheon was served at the Pontiac Hotel after which a telegram was read from Dr William A Groat, regretting his absence because of illness. Dr O W H Mitchell spoke for Dr Thomas P Farmer, of the Education Committee of the State Society, outlining a course in dietetics soon to be given for the District in Syracuse. Dr Joseph S Lawrence emphasized the need of cooperation between the component societies. Dr Terry M Townsend, president of the Medical Society of the State of New York, spoke briefly on the subject of regimentation of the physician.

The following papers were presented in the afternoon session "Practical Endocrinology," by Dr Samuel H Geist, clinical professor of gynecology, Columbia University, College of Physicians and Surgeons, New York City, "Surgery of the Gallbladder," by Dr John F Erdmann, Postgraduate Hospital, New York City.

The discussion of Dr Geist's paper was opened by Dr Nathan P Sears, of Syracuse. Dr

Hyzer W Jones, of Utica, opened the discussion of Dr Erdmann's paper. Dr Sabin moved a rising vote of thanks for the speakers.

Under the heading of new business, because of the lateness of the hour, the reading of the minutes of the previous meeting and the meeting of executive committee was omitted. Dr Louis C Kress, director of the Cancer Division of the State Department of Health, spoke briefly regarding cancer clinics in each hospital to be conducted by hospital staffs with assistance, when desired, and consultation from the State Institute of Malignancy. He stressed the idea of keeping the patient at home under the care of his family doctor, and he also urged the use of the card for reporting clinical cases to the health office. This movement is backed by the State Society, and Dr Kress asked for the cooperation of all physicians in sending in these reports.

The nominating committee offered the following slate of officers: president, Dr Fred C Sabin, first vice-president, Dr Edward C Reifenstein, second vice-president, Dr William Hale, secretary, Dr Sherman M Burns, treasurer, Dr Edgar O Boggs. It was moved and seconded that the slate as suggested by the nominating committee be accepted. With this motion carried, these officers were declared elected. The meeting adjourned at 5 00 P M.

Special entertainment was arranged by the Woman's Auxiliary of the Oswego County Medical Society for wives of physicians attending the Fifth District meeting. Registration took place at the Pontiac Hotel in the morning with Mrs J B Ringland and Mrs K. Wood Jarvis in charge and other members of the auxiliary acting as reception committee.

A tour of the city in Gould's bus, with visits to Fort Ontario, the normal school, and other points of interest, preceded luncheon at the Elks' Club at one o'clock. A visit to the Oswego Candy Works followed, and later tea was served in the Pontiac rotunda from 4 00 to 6 00 P M with Mrs Grover C Elder, hostess. Lee Springall's string trio rendered a musical program during the social period.

The committee in charge of arrangements for the program consisted of Mrs Ringland, Mrs. Jarvis, Mrs Elder, Mrs D D O'Brien, Mrs J T Dwyer, and Mrs George Marsden. Approximately forty women were present.

Respectfully submitted,  
CHARLES A EARL, M D, President

February, 1940

## Report of the Sixth District Branch

### To the House of Delegates, Gentlemen

The thirty-third annual meeting of the Sixth District Branch of the Medical Society of the State of New York was held Thursday, September 21, 1939, at Hotel Arlington, Binghamton.

The meeting was called to order at 10 35 A M, the president, Dr Reeve B Howland, presiding.

A nominating committee was appointed by the chair: Dr LaRue Colegrove, Dr John Wattenberg, and Dr Guy Carpenter.

The first paper was presented by Dr Marjorie

F Murray of Cooperstown, pediatrician in chief, Mary Imogene Bassett Hospital. Health records of 590 rural school children were reviewed. Abnormalities of teeth and tonsils were consistently high, while nutritional, orthopedic, and cardiac abnormalities recorded varied greatly in frequency from school to school. Few new defects were found after the first few grades. The value of such routine examinations is questionable. The discussion was opened by Dr Herbert W Fudge, F A C S, of Elmira.

## House of Delegates

### Reference Committees

**T**HE Speaker, Dr James M. Flynn, announces appointment of the reference committees for the meeting, May 6, 1940, which are as follows

#### *Report of*

#### *Credentials*

Peter Irving, Chairman, New York  
Edward C. Podvin, Bronx  
Moses H. Krakow, Bronx  
Bernard S. Strait, Yates  
Ralph Sheldon, Wayne

#### *President*

Arthur F. Heyl, Chairman, Westchester  
Floyd J. Atwell, Otsego  
Stephen H. Curtis, Rensselaer  
Howard Fox, New York  
Robert F. Barber, Kings

#### *Council—Part I*

Introduction  
Maternal Welfare  
Postgraduate Medical Education  
Public Health and Other Matters  
Leo F. Schiff, Chairman, Clinton  
Robert Brittain, Delaware  
Morris Maslon, Warren  
David E. Overton, Nassau  
Louis A. Friedman, Bronx

#### *Council—Part II*

Civil Service Qualifications  
Crippled Children's Act  
License Plates 'M D'  
Medical Expense Indemnity Insurance  
Medical Relief  
Motor Vehicle Drivers  
New York State Public High School Athletic Association  
Saratoga Springs Commission  
Sterilization for Expediency in Relief Cases  
U. S. Farm Security Administration  
Leo F. Simpson, Chairman, Monroe  
E. Christopher Wood, Westchester  
Andrew Sloan, Oneida  
Harvey P. Hoffman, Erie  
John B. D'Albora, Kings

#### *Council—Part III*

Workmen's Compensation  
James R. Reuling, Jr., Chairman, Queens  
Harry C. Guess, Erie  
William A. MacVay, Monroe  
Arthur S. Driscoll, Richmond  
Homer J. Knickerbocker, Ontario

#### *Council—Part IV*

Legislation  
Publications  
Medical Publicity  
Floyd S. Winslow, Chairman, Monroe  
Charles C. Trembley, Franklin  
Moses A. Stivers, Orange  
Alec N. Thomson, Kings  
C. Knight Deyo, Dutchess

#### *Council—Part V*

Annual Meeting Arrangements  
Contract Practice  
Delegates Representatives and Nominations  
District Branches  
Dues Year and Fiscal Year  
Eichacker v. New York Telephone Co.  
Malpractice Group Plan Insurance  
Membership—County Society Transfers  
Memorials  
Offices, Centralization of  
Paternity Tests  
Physicians' Home Inc.  
Revision of Principles of Professional Conduct  
Trustees, Board of—Election of Trustee

Samuel B. Burk, Chairman, New York  
Warren Wooden, Monroe  
Thurber LeWin, Erie  
John D. Carroll, Rensselaer  
Thomas A. McGoldrick, Kings

#### *Secretary, Censors and District Branches*

Louis A. Van Kleeck, Chairman, Nassau  
Denver M. Vickers, Washington  
William A. Moulton, Tioga  
Frederic W. Holcomb, Ulster  
W. Grant Cooper, St. Lawrence

#### *Treasurer and Trustees*

Peter J. Di Natale, Chairman, Genesee  
John J. Rooney, Monroe  
William Klein, Bronx  
Joseph Wrana, Queens  
Horace M. Hicks, Montgomery

#### *Legal Counsel*

Moses Keschner, Chairman, New York  
W. Guernsey Frey, Jr., Queens  
Albert G. Swift, Onondaga  
Merwin E. Marsland, Westchester  
John T. Donovan, Erie

#### *New Business A*

Edward R. Cunniffe, Chairman, Bronx  
Edgar Bieber, Chautauqua  
Alfred M. Hellman, New York  
William Hale, Oneida  
David W. Beard, Schoharie

#### *New Business B*

Norman S. Moore, Chairman, Tompkins  
Charles A. Anderson, Kings  
Albert A. Gartner, Erie  
Clarence V. Costello, Monroe  
Leon M. Kysor, Steuben

#### *New Business C*

John J. Masterson, Chairman, Kings  
J. Lewis Amster, Bronx  
Carlton E. Wertz, Erie  
G. Scott Towne, Saratoga  
Stanley E. Alderson, Albany

and gave the world the science of surgery), "The Story of Dr Jenner" (England's country doctor, who discovered vaccination against smallpox), "That Mothers Might Live" (Semmelweis, who brought modern sanitation to childbirth)

At 11 00 the president-elect of the American Medical Association, Dr Nathan B Van Eetten, gave a twenty-minute address on "The Quality of Medicine" This was followed by an address by Dr Edward S Godfrey, Jr, New York State Commissioner of Health, on the subject, "The Confluence of Clinical Medicine and Public Health" "Political Medicine" was the subject of Dr Terry M Townsend's address at 11 40 The morning session closed with a short business session for election of officers The following list of officers for two years was chosen president, Dr Frederick W Lester, Seneca Falls, first vice-president, Dr Benjamin J Slater, Rochester, second vice-president, Dr Homer J Knickerbocker, Geneva, secretary, Dr John J Finigan, Rochester, treasurer, Dr Howard S Brasted, Hornell

An opportunity was given between 12 and 1 P M, for a visit to the beautiful Sonnenberg Gardens, part of the hospital campus Dinner in the main dining room of the hospital at one o'clock was followed by the introduction of guests and the taking of a group photograph

In the afternoon, those in attendance divided themselves into five groups, having selected a group which interested them most for the follow-

ing programs (1) Surgical Emergencies—first aid methods, splinting of fractures, transportation of persons injured in highway accidents, hunting accidents, burns, demonstration of blood transfusion apparatus, etc., suggestions for prevention of accidents Narrator Dr Donald J Tillou, Elmira (2) Care of Premature Infants Narrator Dr Burtis B Breese, Jr, Rochester, assisted by Dr Philip M Standish, Canandaigua, and Sarah Wheeler, R N, Rochester General Hospital (3) Peripheral Vascular Diseases—demonstration and animated exhibit Narrator Dr Herman E Pearce, Rochester, assisted by Dr James M Flynn, Dr Charles Gibbs, Dr Charles Lakeman, all of Rochester (4) Physiotherapy—demonstration of apparatus and presentation of cases to illustrate results Narrator Dr Louis Lopez, Veterans' Hospital Staff, assisted by Mr Peter Montville and Mr Jack Blaustein, aides (5) Occupational Therapy—results in reconstruction and re-education with demonstration of apparatus used Narrator Dr Raymond Wafer, Veterans' Hospital Staff, assisted by Mr Horace Funk, Miss Jane Leary, and Mr Beverly Miangolarra, aides

Judging from the many favorable comments heard, it is believed that this form of program was appreciated and was well worth the effort expended by the committee and those responsible for the program

Respectfully submitted,

ALFRED W ARMSTRONG, M D *President*  
January 11, 1940

## Report of the Eighth District Branch

### *To the House of Delegates, Gentlemen*

The principal activity of the Eighth District Medical Society of the State of New York was as usual its annual scientific session, which was held in Batavia, October 5, 1939 All of the essayists have had unusual experience in their respective fields, thus assuring a very interesting and instructive program The scientific program was as follows "Trauma and Low Back Pain," by Dr Grover C Penberthy, Detroit, Michigan, "Hematuria Its Clinical Significance," by Dr George F Cahill, New York City, "The Problem of Rheumatic Infection in Childhood," by Dr Albert D Kaiser, Rochester, "Roentgenology as an Aid in the Diagnosis of Heart Disease," by Dr Merrill C Sosman, Boston, Massachusetts Round Table "The Diagnosis and Therapy of the Frequent Gastrointestinal Lesions Met with in General Practice," by Dr Abraham H Aaron, Buffalo, chairman. The following men discussed questions submitted Dr Francis D Leopold, Dr Walter L Macheimer, Dr J Sutton Regan, Dr Edward C Koenig, Dr Stuart L Vaughan, all of Buffalo

Following the luncheon Dr Terry M Town-

send, of New York, president of the State Medical Society, addressed the meeting

Other state officers included Dr Peter Irving, secretary, and Dr Joseph S Lawrence, executive secretary

There was considerable discussion at the meeting regarding the Western New York Medical Indemnity Plan, and nominations were made for directors-at-large

One hundred and sixty-two members and guests were present

There were two conferences of officers of the Eighth District during the year, and attention was given by the officers of the district to the formation of the Western New York Medical Indemnity Plan. Without a district organization the formation of such a plan would have been decidedly handicapped in western New York, inasmuch as the district has afforded means of cooperation throughout the various counties which expect to participate in the inauguration of the Medical Indemnity Plan for medical care

Respectfully submitted

L L KLOSTERMYER M D *President*  
February 9 1940

# The Woman's Auxiliary

To the Medical Society of the State of New York

Headquarters—Carpenter Suite, The Waldorf-Astoria, New York City

## Officers

*President* Mrs G Scott Towne Saratoga Springs  
*President-elect* Mrs Luther H Kice, Garden City  
*First vice-president*, Mrs John J Buettner Syracuse  
*Second vice-president*, Mrs Robert L Crockett, Oneida  
*Treasurer*, Mrs Carlton F Potter, Syracuse  
*Recording secretary* Mrs J Emerson Noll, Port Jervis  
*Corresponding secretary* Mrs James H Donnelly Troy

## Convention Committee Chairmen

General, Mrs Louis M Lall	Headquarters, Mrs Meyerson Coe
Dinner, Mrs Louis A Van Kleeck	House of Delegates, Mrs William Burke
Tea, Mrs John W Mahoney (All county presidents will be hostesses)	Information, Mrs Morris W Henry
Entertainment Mrs Edwin A Griffin	Resolutions, Mrs John J Buettner
Hobby Show, Mrs Carl Wedge	Printing, Mrs Spencer Caldwell
Flowers, Mrs William Lavelle	Publicity, Mrs Milton B Bergmann
Hospitality, Mrs Arthur C Martin	General Registration, Mrs P A William
	Delegates, Mrs Hugh Henry

Doctors' wives will please register at Registration Desk, Silver Corridor

All doctors' wives, whether members of a woman's auxiliary to a county medical society or not, are cordially invited to participate in all parts of the program

## Monday, May 6, 1940

9 00 A.M. Registration of delegates Silver Corridor

9 00 A.M. - 5 00 P.M. General registration for all doctors wives, daily throughout the convention Silver Corridor

9 00 A.M. - 4 00 P.M. Registration for Auxiliary dinner (7 00 P.M.), Registration Desk, Silver Corridor

9 00 A.M. - 4 00 P.M. Registration for Auxiliary tea (Tuesday, 3 00 P.M.) Registration Desk, Silver Corridor

9 30 A.M. Executive Board Meeting—Jansen Suite

10 00 A.M. House of Delegates Meeting—Jansen Suite

10 00 A.M. - 10 00 P.M. Hobby Show—Carpenter Suite

10 00 P.M. House of Delegates Meeting (continuation)—Jansen Suite

2 00 P.M. Address by Dr Louis A Van Kleeck

7 00 P.M. Dinner for Auxiliary members, all doctors wives and lay friends—Le Perroquet Suite (secure tickets before 4 00 P.M. at Registration Desk)

Guest speaker—Mrs Rollo K. Packard, president, Woman's Auxiliary to the American Medical Association

Entertainment (following dinner)—Raymond Heatherton radio artist

## Tuesday, May 7

9 00 A.M. - 5 00 P.M. Registration continued — Silver Corridor

10 00 A.M. - 10 00 P.M. Hobby Show—Carpenter Suite

10 00 A.M. Postconvention—Executive Board Meeting—Jansen Suite

3 00 P.M. Tea, Le Perroquet Suite (secure tickets at Registration Desk, Silver Corridor, before noon)

Entertainment following tea—Mrs Walter Kove, pianist and Mrs G P Bergmann, soloist

7 00 P.M. Dinner of the Medical Society of the State of New York Grand Ballroom

## Wednesday, May 8

9 00 A.M. - 5 00 P.M. Registration continued — Silver Corridor

10 00 A.M. - 10 00 P.M. Hobby Show—Carpenter Suite

11 00 A.M. Inspection tour of the Waldorf Astoria Hotel—conducted by the management

## Thursday, May 9

10 00 A.M. - 12 00 P.M. Call for hobbies

# Medical Society of the State of New York

Annual Meeting, May 6, 7, 8, 9, 1940

The Waldorf-Astoria, New York City

*All meetings will be by Daylight Saving Time*

## House of Delegates

The regular Annual Meeting of the House of Delegates of the Medical Society of the State of New York will be called to order at 10 00 A M on Monday, May 6, 1940, in the Ballroom of The Waldorf-Astoria

JAMES M FLYNN, M D , *Speaker*

PETER IRVING, M D , *Secretary*

## Annual Meeting

The Annual Meeting of the Medical Society of the State of New York will be held on Tuesday, May 7, 1940, at 7 00 P M , in the Ballroom of The Waldorf-Astoria

TERRY M TOWNSEND, M D , *President*

PETER IRVING, M D , *Secretary*

## Registration

Registration will be held in the hotel for delegates on Monday, May 6, after 9 00 A M , for members on Monday, Tuesday, Wednesday, and Thursday, May 6, 7, 8, and 9, from 9 00 A M to 6 00 P M

## Exhibits

Scientific and Technical exhibits will be located in the hotel

Scientific Motion Pictures will be shown in the Empire Room each afternoon

## Scientific Sessions

General Sessions on Tuesday and Thursday afternoons Section and Session meetings on Monday afternoon, Tuesday morning, Wednesday morning and afternoon, and Thursday morning, will be held in the hotel (See page 591 )

## 134th Annual Meeting

The Waldorf-Astoria, Ballroom—Tuesday, May 7, 7 00 P M

Calling the Society to order by the President, Terry M Townsend, M D

Reading of the minutes of the 133rd Annual Meeting by the Secretary, Peter Irving, M D

## The Annual Banquet

The Annual Banquet will be held in the Ballroom of The Waldorf-Astoria on Tuesday, May 7, at 7 00 P M The guest speakers will be announced later

Requests for tickets and reservations should be sent to Chas Gordon Heyd, M D , chairman, Banquet Committee, 292 Madison Avenue, New York City, or telephone, Atwater 9-7630 Tickets will be \$5 00

## Public Meeting, Wednesday Evening, May 8

In the Ballroom will be held a meeting for the public at 8 30 P M on Wednesday, May 8, 1940 Cards of invitation (without cost) can be secured in advance by writing to Francis N Kimball, M D , chairman, Public Meeting Committee, 292 Madison Avenue, New York City, Telephone, Atwater 9-7630, or they can be obtained at the Registration Desk in the hotel

## The Woman's Auxiliary

The headquarters will be in the Carpenter Suite, and the ladies are asked to register at the Registration Desk in the Silver Corridor after 9 00 A M , Monday, May 6, 1940

Monday will be given over to meetings of the Executive Board and of the House of Delegates of the Auxiliary (Jansen Suite)

Dinner will be at 7 00 P M on Monday in Le Perroquet Suite Tickets for auxiliary members, all doctors' wives, and lay friends must be secured at the Registration Desk before 4 00 P M , Monday

Tea will be at 3 00 P M on Tuesday, May 7, in Le Perroquet Suite Tickets must be secured before noon on Tuesday at the Registration Desk in the Silver Corridor

A hobby show will begin on Monday and continue through Wednesday

# Scientific Program

Albert F R Andresen, M D , *Chairman*, Brooklyn, and Chairmen of Sections and Sessions

## GENERAL SESSIONS

The presentations at these Sessions will consist of one-half hour lectures by prominent guests of the Society There will be no discussion

The meetings will start promptly at the hour specified Members are requested to be in their seats at least five minutes in advance of the meeting time

Tuesday, May 7—2 00 P M  
The Waldorf-Astoria, Ballroom

### ARMY AND NAVY PROGRAM

With the world a great military camp, the medical problems of warfare are of great interest and importance. In addition to this, many of the problems studied by our Army and Navy medical departments are of practical importance in civilian practice. The speakers in this symposium are all experts in their line and will attempt to show the application of their researches to everyday medical practice.

General Medical Problems in Aviation  
Capt. Harry G Armstrong, M D , Medical Corps, U S Army, Dayton, Ohio

3 Medical Problems of Future Chemical Warfare  
Lt. Col. William D Fleming, M D , Medical Corps, U S Army, Washington, D C

Problems of Diving and Submarines  
Capt. Lucius W Johnson, D D S , M D , F.A.C.S., Medical Corps, U S Navy Washington, D C

4 Noise in Relation to Hearing and Efficiency  
Lt. Albert R. Behnke, Jr, M D , Medical Corps, U S Navy Washington, D C

Thursday, May 9—2 00 P.M.  
The Waldorf-Astoria, Ballroom

### EARLY RECOGNITION OF SERIOUS LESIONS IN SPECIAL FIELDS OF MEDICINE

It is a common complaint of the specialist that too often serious conditions coming within the scope of his work are overlooked by the family medical attendant and when referred to him have reached a stage of development where cure may be impossible and even palliation extremely difficult The speakers on this program are all specialists who have given this problem careful study and who will present in a clear, concise way suggestions for the early recognition of serious conditions in their respective fields

Early Recognition of Serious Lesions of Eye  
Francis H. Adler, M D , Professor of Ophthalmology, University of Pennsylvania School of Medicine, Philadelphia, Pennsylvania

and Gynecologist, Hartford Hospital Hartford, Connecticut

2 Early Recognition of Serious Lesions of Nose, Throat, and Ear

4 Early Recognition of Serious Urological Lesions (The A. Walter Suiter Lectureship)

Hugh H. Young, M D , The Johns Hopkins Hospital, Baltimore

George Morrison Coates, M D , Professor of Otorhinology, University of Pennsylvania School of Medicine, Philadelphia

3 Early Recognition of Serious Gynecological Lesions

(This will be the second lecture to be delivered under this lectureship fund set up for the Medical Society of the State of New York by the will of the late Dr A Walter Suiter of Herkimer, President of the Society in 1892 )

James Reglan Miller, M D , Obstetrician

## THE SECTIONS

All papers read before the Society by members become the property of the Society The original copy of each paper shall be left with the secretary of the section

Discussers should have their remarks typed in a form suitable for publication and should hand them to the secretary

# Women's Medical Society of New York State

**T**HE thirty-fourth Annual Meeting will be held on May 6 with headquarters at the Waldorf-Astoria Hotel. Women physicians are asked to register beginning at 9 30 A M. The program is as follows:

9 30 Business Session  
12 30 to 1 30 Luncheon  
2 00 to 4 30 Scientific Program

The Stimulation of Height in Short Children  
A Preliminary Report by Dr. Josephine Kenyon

Treatment of Heart Failure by Dr. Connie Guion  
Discussion by Dr. Ada Chree Reid

Diagnosis and Treatment of Bronchial Asthma  
by Dr. Florence Sammis  
Discussion by Dr.

Theresa Scanlan and Dr. Leone Neumann Cla man

Diagnosis and Treatment of Chronic Arthritis  
by Dr. Marian Tyndall  
Discussion by Dr. Madge C. L. McGuinness

The president's tea will take place at the Cosmopolitan Club, 122 East 68th Street, from 4 00 to 6 00 P M on Sunday, May 5

All members are urged to attend the banquet on Tuesday evening, May 7, at the Waldorf Astoria Hotel

ALICE STONE WOOLLEY, M D, *President*  
ISABEL M. SCHARNAGEL, M D, *Secretary*

## Officers of the Women's Medical Society

### Honorary Presidents

Mary T. Greene, M D  
Helene J. C. Kuhlmann, M D  
Rosalee Slaughter Morton, M D  
Marion Craig Potter, M D

### President

Alice Stone Woolley, M D  
20 S. Hamilton St., Poughkeepsie

### Vice-Presidents

Marguerite P. McCarthy, M D  
102 Caroline Ave., Solvay  
Mary E. Potter, M D  
305 S. Washington Ave., Brooklyn  
Lillian A. Treat, M D  
51 Franklin St., Auburn

### Treasurer

Alta Sager Green, M D  
30 S. Cayuga St., Williamsville

### Secretary

Isabel M. Scharnagel, M D  
155 E. 73rd St., New York City

### Councillors

#### 1st District Branch

Isabel Knowlton, M D  
80 Irving Place, New York City

#### 2nd District Branch

Cora M. Ballard, M D  
95 Brooklyn Ave., Brooklyn

#### 3rd District Branch

Isabelle F. Borden, M D  
State Education Dept., Albany

### 4th District Branch

Annetta E. Barber, M D  
8 Notre Dame St., Glens Falls

### 5th District Branch

Clara H. Pierce, M D  
127 Harding Place, Syracuse

### 6th District Branch

Anna M. Stuart, M D  
656 Park Pl., Elmira

### 7th District Branch

M. Louise Hurrell, M D  
277 Alexander St., Rochester

### 8th District Branch

Katherine F. Carnivale, M D  
454 Porter Ave., Buffalo

### Honorary Councillors

Helene J. C. Kuhlmann, M D  
Marion Craig Potter, M D  
Maud J. Frye, M D  
Emily Dunning Barringer, M D  
Lois L. Gannet, M D  
Bsther Parker, M D  
Mary Dunning Rose, M D  
Ethel Doty Brown, M D  
Rosalee Slaughter Morton, M D  
Anna H. Voorhis, M D  
Daisy M. O. Robinson, M D  
Louise Beamus-Hood, M D  
Marion S. Morse, M D  
Mary J. Kazmierczak, M D  
Clara H. Pierce, M D  
Flise S. L. Esperance, M D  
Madge C. L. McGuinness, M D

### Honorary Members

Maude E. Abbott, M D, Montreal  
Canada  
Catherine Macfarlane, M D, Philadelphia Pa.  
Kate B. Karpeles, M D, Washington D C  
Mrs. Margaret H. Rockhill, Cincinnati Ohio

### CHAIRMAN OF COMMITTEES

#### Scientific Program

Theresa Scanlan, M D  
133 E. 58th St., New York City

#### Legislative

Louise Beamus-Hood, M D  
153 Bidwell Parkway, Buffalo

#### Medical Education

Mary T. Greene, M D  
Castile, N Y

#### Public Health

Sophie Rabinoff, M D  
130 W. 86th St., New York City

#### Public Relations

Mary J. Kazmierczak, M D  
957 Sycamore St., Buffalo

#### Membership

M. Elizabeth Howe, M D  
30 E. 40th St., New York City

#### Resolutions

Anna Samuelson, M D  
1111 Park Ave., New York City

#### Publicity

Anna Kleegman Daniels, M D  
150 Riverside Drive, New York City

Thursday, May 9—10 00 A.M.  
The Waldorf-Astoria, Empire Room

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

Vitamin K Deficiency in the Absence of Jaundice

Thomas T Mackie, M D, New York  
Ruth Bach, M.A., New York (By invitation)

Discussion Cornelius P Rhoads, M D, and William De Witt Andrus, M D, New York

The Clinical Application of Secretin in the Study of Pancreatic Function

Joseph S Diamond, M D, New York  
Sigmund A. Siegel, M D, New York  
Samuel Myerson, M D, New York

Discussion John L Kantor, M D, and Henry Doubulet, M D, New York

3 Ulcerative Colitis—Its Management and the Indications for Surgical Treatment

Frank H Lahey, M D, Boston (By invitation)

Discussion John H Garlock, M D, and Henry W Cave, M D, New York

4 The Management of Gross Hemorrhage in Peptic Ulcer—A Report of 168 Cases

Harry L Segal, M D, Rochester  
W J Merle Scott, M D, Rochester  
Roland S Stevens, M D, Chicago (By invitation)

Discussion Stockton Kimball, M D, Buffalo, and John B D'Albora, M D, Brooklyn

## SECTION ON INDUSTRIAL MEDICINE AND SURGERY

Chairman  
Secretary

Irving Gray, M D, Brooklyn  
John J Wittmer, M D, Brooklyn

Wednesday, May 8—9 15 A.M.  
The Waldorf-Astoria, Assembly Rooms N, P R

Syphilis in Industry

Earl D Osborne, M D, Buffalo

Discussion Theodore Rosenthal, M D New York, and George H Gehrman, M D Wilmington, Delaware (By invitation)

Medical Examination of the Prospective Worker

J C Zillhardt, M D, Binghamton

Discussion Niel E Eckelberry, M D, and Michael Lake, M D, New York

3 A Program for Detection of Possible Toxic Responses to a Varied Organic Chemical Exposure

James H. Sterner, M D, Rochester

Discussion Leonard Greenburg, M D, New York, and May R. Mayers, M D, New York (By invitation)

Thursday, May 9—9 15 A.M.

The Waldorf-Astoria, Assembly Rooms N, P, R

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

Treatment of Infections Following Traumatism

Frederick S Wetherell, M D, Syracuse

Discussion John H Garlock, M D, and H Van Ness Spaulding, M D, New York

Office Treatment in Traumatic Surgery

Howard L Prince, M D Rochester

Discussion Ralph F Harloe, M D, Brooklyn and James M Hitzrot, M D New York

3 The Rehabilitation of the Injured

Henry H Kessler, M D, Newark, New Jersey (By invitation)

Discussion Willis W Lasher M D, and John J Moorhead, M D, New York

## SECTION ON MEDICINE

Chairman  
Secretary

Frederic C Conway, M D, Albany  
Louis F Bishop, Jr, M D, New York

Wednesday, May 8—2 00 P M.  
The Waldorf-Astoria, Grand Ballroom

### SYMPOSIUM

CHRONIC DISEASES WITH SPECIAL REFERENCE TO DIAGNOSIS AND TREATMENT



Time limits twenty minutes for each paper, five minutes for individual discussion

Section meetings shall begin promptly at the hour specified

### SECTION ON DERMATOLOGY AND SYPHILOLOGY

Chairman

Frank C Combes, M D, New York

Secretary

Rudolph Ruedemann, Jr, M D, Albany

Tuesday, May 7—10 00 A.M

The Waldorf-Astoria, Assembly Rooms N, P, R

- |   |  |  |
|---|--|--|
| 1 | Roentgen-Ray Therapy of Plantar Warts<br>Andrew H. Montgomery, M D, New York<br>Royal M. Montgomery, M D, New York | George C. Andrews, M D, New York<br>A. Brooks Abshier, M D, New York   |
|   | Discussion John G. Copeland, M D, Albany   | Discussion Albert R. McFarland, M D, Rochester   |
| 2 | Hereditary Trophoedema (Milroy-Meige)<br>David Bloom, M D, New York  |  |
| 3 | Nutritional Disturbances in Relation to Skin Diseases  | 4 The Present Status of Granuloma Inguinale<br>Harry C. Saunders, M D, New York<br>Orlando Canizares, M D, New York<br>Discussion William Leifer, M D, Buffalo |

Wednesday, May 8—2 00 P M

The Waldorf-Astoria, Assembly Rooms N, P, R

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

- |   |  |   |   |
|---|--|---|---|
| 1 | The Prescription for the Skin<br>Herman Goodman, M D, New York | 3 | Syphilis in the Pregnant Woman—Its Diagnosis and Treatment<br>Mortimer D. Speiser, M D, New York        |
|   | Discussion Herbert H. Bauckus, M D, Buffalo                    |   | Discussion William A. Brumfield, Jr, M D, Albany  |
| 2 | Eruptions of Pregnancy<br>Maurice J. Costello, M D, New York   | 4 | Tonsillitis in Secondary Syphilis<br>Evan W. Thomas, M D, New York<br>David H. Goldstein, M D, New York |
|   | Discussion Mark Heiman, M D, Syracuse                          |   | Discussion Leon Griggs, M D, Syracuse   |

### SECTION ON GASTROENTEROLOGY AND PROCTOLOGY

Chairman

Harry C. Guess, M D, Buffalo

Vice-Chairman

John L. Kantor, M D, New York

Secretary

A. W. Martin Marino, M D, Brooklyn

Wednesday, May 8—10 00 A.M

The Waldorf-Astoria, Empire Room

#### ROUND TABLE

A series of questions on subjects in the field of proctology submitted in writing in advance or during the meeting will be discussed by the members of a round table group as follows

- |   |  |   |   |
|---|--|---|---|
| 1 | From the Standpoint of Proctology<br>Frank C. Yeomans, M D, New York                     | 3 | From the Standpoint of Pathology<br>James Ewing, M D, New York                  |
| 2 | From the Standpoint of Proctology and Radium Therapy<br>George E. Binkley, M D, New York | 4 | From the Standpoint of Radiology<br>A. L. Loomis Bell, M D, Brooklyn            |
|   |  | 5 | From the Standpoint of Gastroenterology<br>Albert F. R. Andresen, M D, Brooklyn |

Present Status of Sex Hormone Therapy in  
Obstetrics and Gynecology

Raphael Kurzrok, M D, New York

Discussion Charles H. Burnberg, M.D.,  
Brooklyn, and Edwin G. Langrock, M D,  
New York

4 The Occiput Posterior Position and the  
Modified Scanzoni Maneuver

Raymond J. Pieri, M D, Syracuse

Discussion Joseph O'C. Kiernan, M D  
Albany and Milton G. Potter, M D, Buffalo

Thursday, May 9—9 45 A.M.  
The Waldorf-Astoria, Sert Room

Executive Session—The first order of business, election of officers "To participate  
in the election of any Section, a member must be registered with such Section and must  
have recorded his name and address in the Section registry" Bylaws, Chapter XIII,  
Section 3

Clinical Features of Endometriosis

Lyle A. Sutton, M D, Albany

Discussion Ralph A. Hurd, M D, New  
York

Conservative Surgery in the Treatment of  
Recurrent Salpingitis

Henry C. Falk, M D, New York

Discussion Frederick C. Holden, M D,  
New York

3 Sarcoma of the Uterus

Frank R. Smith, M D, New York

Discussion James Ewing, M.D., New York

4 The Hazards Associated with Pregnancy and  
Labor in the Grande Multipara

Nicholson J. Eastman, M D, Baltimore  
(By invitation)

Discussion Albert H. Aldridge, M D,  
New York

## SECTION ON OPHTHALMOLOGY AND OTOLARYNGOLOGY

Chairman

Chester C. Cott, M D, Buffalo

Secretary

Searle B. Marlow, M D, Syracuse

Tuesday, May 7—9 00 A.M.  
The Waldorf-Astoria, Le Perroquet Suite

Instruction Hour Angioscotometry

John N. Evans, M D, Brooklyn

The Rationale of the Treatment of Glaucoma  
from the Viewpoint of Pathology

Theodore L. Terry, M D, Boston, Massa-  
chusetts (By invitation)

2 The Treatment of Uveitis

John F. Gipner, M D Rochester

3 Undulant Fever and the Eye—An Adven-  
ture in Angioscotometry

Leonard W. Jones, M D, Rochester

Joint Round Table Discussion with Section on Pediatrics

11 00 A.M., The Waldorf-Astoria, Sert Room

The Section is invited to attend the Round Table on "Diagnosis and Treatment of  
Upper Respiratory Infections in Childhood" included in the program of the Section on  
Pediatrics

Wednesday, May 8—2 00 P.M.  
The Waldorf-Astoria, Le Perroquet Suite

Executive Session—The first order of business, election of officers "To participate  
in the election of any Section, a member must be registered with such Section and must  
have recorded his name and address in the Section registry" Bylaws, Chapter XIII  
Section 3

The Postconcussional Syndrome

Mortimer G. Brown, M.D. Syracuse

3 The Management of Clinical Problems In-  
volving the Larynx in Infancy and Childhood

Clyde A. Heatly, M D, Rochester

The Treatment and Results of Tuberculosis  
of the Trachea and Bronchi

John D. Kerman, M D, New York

4 Biochemistry in Otolaryngology

D'Arcy McGregor, M D, Buffalo

## SECTION ON ORTHOPEDIC SURGERY

Chairman

Joseph B. L'Episcopo, M D, Brooklyn

Secretary

Frank N. Potts, M D, Buffalo

Tuesday, May 7—10 00 A.M.  
The Waldorf-Astoria, Jansen Suite

- |   |   |
|---|---|
| 1 Cerebral Disease<br>Wardner D Ayer, M D , Syracuse<br>2 Progress in Ophthalmology<br>Arthur J Bedell, M D , Albany<br>3 The Diagnosis and Treatment of Chronic Heart Diseases<br>Clarence E de la Chappelle, M D , New York | 4 Symptoms Following Cholecystectomy<br>R. Franklin Carter, M D , New York<br>5 Common Chronic Non-Tuberculous Renal Infections—Their Significance and Treatment<br>Winfield W Scott, M D , Rochester |
|---|---|

Thursday, May 9—10 00 A.M

The Waldorf-Astoria, Assembly Rooms J, K, L, M

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII Section 3

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|--|--|
| 1 The Nerve Pathways and Clinical Features of Shoulder Pain in Relation to Angina Pectoris<br>Heymen R. Miller, M D , New York<br>Discussion Tracy J Putnam, M D , New York (By invitation), and Tasker Howard, M D , Brooklyn<br>2 The Clinical Interpretation of Blood Stream Infections | Chester S Keefer, M D , Boston Massachusetts (By invitation)<br>Discussion Ward J MacNeal, M D , and Frank L Meleney, M D , New York<br>3 Heparin<br>Charles H Best, M D , Toronto, Canada (By invitation)<br>Discussion Frederic W Bancroft, M D , and Paul Reznikoff, M D , New York |
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### SECTION ON NEUROLOGY AND PSYCHIATRY

Chairman  
Secretary

Henry W Miller, M D , Brewster  
Wallace B Hamby, M D , Buffalo

Tuesday, May 7—10 00 A.M

The Waldorf-Astoria, Assembly Rooms J, K, L, M

- |   |   |
|---|---|
| 1 A New Angle on Trigeminal Neuralgia<br>Henry Ward Williams, M D , Rochester<br>2 Neurosurgical Approach to the Problem of Epilepsy<br>John E Scarff, M D , New York<br>3 The Incipient Psychoses and the General Practitioner | B Liber, M D , New York<br>Discussion Bernard Glueck, M D , New York<br>4 Enormous Myelomeningocele with Fatal Leakage<br>Arthur D Ecker, M D , Syracuse<br>J Howard Ferguson, M D , Syracuse |
|---|---|

Wednesday, May 8—2 00 P.M

The Waldorf-Astoria, Assembly Rooms J, K, L, M

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

- |  |   |
|--|---|
| 1 Comparing the Effects of Rabellon and Bellabulgara in the Treatment of Chronic Encephalitis<br>Josephine B Neal, M D , New York<br>Stanley M Dillenberg, M D , New York<br>2 Ambulatory Insulin Treatment in Mental Disorders<br>Phillip Polatin, M D , New York | 3 Clinical and Diagnostic Application of Electroencephalography<br>Hans Strauss, M D , New York<br>4 The Operation of Genetic Factors in Various Mental Disorders<br>Franz J Kallmann, M D , New York |
|--|---|

### SECTION ON OBSTETRICS AND GYNECOLOGY

Chairman  
Secretary

Edward P McDonald, M D , Albany  
Francis R Irving, M D , Syracuse

Wednesday, May 8—9 45 A.M

The Waldorf-Astoria, Sert Room

- |  |  |
|--|--|
| 1 The Management of Pelvic Tuberculosis<br>Edwin M Jameson, M D , Saranac Lake<br>Discussion James A Corscaden, M D , New York | 2 Urinary Tract Injury During Panhysterec-<br>tomy—A Postoperative Study<br>Arthur J Wallingford, M D , Albany<br>Discussion Arthur J Murphy, M D , New York |
|--|--|

Discussion Wheelan D Sutliff, M D, New York, and Edward C. Reufenstein, M D, Syracuse

monias Occurring at the Rochester General Hospital

Istvan A. Gaspar, M D, Rochester

Discussion Russell L Cecil, M D, and Ward J MacNeal, M D, New York

#### 4 A Study of Primary Staphylococcic Pneu-

### SECTION ON PEDIATRICS

Chairman

Douglas P Arnold, M D, Buffalo

Vice-Chairman

Norman L Hawkins, M D, Watertown

Secretary

Leslie O Ashton, M D, New York

Tuesday, May 7—10:00 A.M.

The Waldorf-Astoria, Sert Room

#### 1 Pancreatic Steatorrhea and Celiac Disease

Dorothy H. Andersen, M D, New York

Discussion Oscar M Schloss, M D, New York

#### 2 Virus Diseases in Childhood

F Howell Wright, M D, New York (By invitation)

Discussion Josephine B Neal, M D New York

### Joint Round Table Discussion with Section on Ophthalmology and Otolaryngology

#### Diagnosis and Treatment of Upper Respiratory Infections in Childhood

Pediatricians and otolaryngologists probably collaborate more frequently than any other specialists. There are many controversial points on diagnosis and treatment of the above conditions, therefore, honest differences of opinion can occur. This Round Table is included to endeavor to crystallize our thoughts and actions for our mutual benefit and for the good of our patients.

#### 1 Nose, Throat, Sinus, Colds, and Tonsils

Albert D Kaiser, M D, Rochester

Robert L. Moorhead, M D, Brooklyn

#### 2 Ear and Mastoid

William J Orr, M D, Buffalo

Isadore Friesner, M D, New York

Members are invited to submit in writing to the Chairman of the Section questions for discussion on the subject of this Round Table.

Wednesday, May 8—2 00 P.M.

The Waldorf-Astoria, Sert Room

Executive Session—The first order of business, election of officers. "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry." Bylaws, Chapter XIII, Section 3.

#### 1 What the Pediatrician Should Know About Surgical Genitourinary Conditions

Meredith F Campbell, M.D, New York

Discussion James R. Wilson, M D, Syracuse

#### 2 Problems of Puberty in Boys

Bruce Webster, M D, New York

Discussion William A. Schonfeld, M.D New York, and A Wilmot Jacobsen, M D, Buffalo

#### 3 Problems of Puberty in Girls

Louis A. Siegel, M D, Buffalo

Discussion Brewster C Doust, M D, Syracuse

#### 4 Tetanus—Its Prevention and Treatment

Joseph K. Calvin, M D, Chicago (By invitation)

Discussion Francis J Gustina, M D, Buffalo

### SECTION ON PUBLIC HEALTH, HYGIENE AND SANITATION

Chairman

Margaret W Barnard, M D, New York

Vice-Chairman

Ray D Champlin, M D, Oneonta

Secretary

Frank E Coughlin, M D, Albany

Wednesday, May 8—10 00 A.M.

The Waldorf-Astoria, Le Perroquet Suite

### SYMPOSIUM

#### PARTICIPATION IN THE PUBLIC HEALTH PROGRAM

#### 1 Public Health Personnel

V A. Van Volkenburgh, M.D, Albany

#### 2 The Medical Profession

Alec N Thomson, M.D, Brooklyn

SYMPOSIUM  
FRACTURES INVOLVING JOINTS

- |   |   |
|---|---|
| <p>1 Fractures Around the Knee Joint<br/>Charles M Allaben, M D, Binghamton</p> <p>2 Fractures Involving the Shoulder Joint<br/>Edward T Wentworth, M D, Rochester</p> <p>3 Fractures About the Elbow Joint<br/>Richard S Farr, M D, Syracuse</p> | <p>4 Fractures About the Ankle Joint<br/>Benjamin E Obletz, M D, Buffalo</p> <p>Discussion on Symposium Philip D Wilson, M D, New York, and R. D Severance, M D, Syracuse</p> |
|---|---|

Wednesday, May 8—2 00 P M  
The Waldorf-Astoria, Jansen Suite

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

- |   |  |
|---|--|
| <p>1 Recorded Muscle Function—Relationship to the Treatment of Abnormal Function of the Feet<br/>R. Plato Schwartz, M D, Rochester<br/>Arthur L Heath, B S, Rochester (By invitation)</p> <p>2 End Results of Elbow Resection<br/>B Franklin Buzby, M D, Camden, New Jersey (By invitation)</p> | <p>3 Congenital Malformation of the Scapula<br/>Alan De Forest Smith, M D, New York<br/>Discussion William H Von Lackum, M D, New York</p> <p>4 Reconstruction of the Tendon Sheath by Means of Celloidin Tube Implantation<br/>Leo Mayer, M D, New York<br/>Nicholas S Ransohoff, M D, New York<br/>Discussion John H Garlock, M D, and Henry H M Lyle, M D, New York</p> |
|---|--|

SECTION ON PATHOLOGY AND CLINICAL PATHOLOGY

Chairman	Walter S Thomas, M D, Rochester
Vice-Chairman	Ward J MacNeal, M D, New York
Secretary	M J Fein, M D, Brooklyn

Wednesday, May 8—10 00 A M  
The Waldorf-Astoria, Blue Room

- |   |  |
|---|--|
| <p>1 Contralateral Adrenal Atrophy Associated with Cortical Adrenal Neoplasms<br/>Tobias Weinberg, M D, New York (By invitation)<br/>Discussion George F Cahill, M D, and Solomon Silver, M D, New York</p> <p>2 Tumors of the Islets of Langerhans with Hyperinsulinism<br/>Virginia Kneeland Frantz, M D, New York<br/>Discussion Maurice N Richter, M D, and Paul Klemperer, M D, New York</p> | <p>3 The Behavior of Tumors in Tissue Culture at Twenty-four Hours<br/>Edwin J Grace, M D, Brooklyn<br/>Discussion Robert Chambers, Ph D, New York (By invitation)</p> <p>4 Technic of the Medicolegal Autopsy<br/>Harrison S Martland, M D, Newark, New Jersey (By invitation)<br/>Discussion Thomas A Gonzales, M D, New York, and Alexander O Gettler, Ph D, New York (By invitation)</p> |
|---|--|

Thursday, May 9—10 00 A M  
The Waldorf-Astoria, Blue Room

Executive Session—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

- |   |  |
|---|--|
| <p>1 Composition of Blood Serum in Clinical and Experimental Injuries of the Liver<br/>Aaron Bodansky, Ph D, New York (By invitation)<br/>Discussion Alexander B Gutman, M D, New York</p> <p>2 Renal Function Tests<br/>Donald D Van Slyke, Ph D, New York (By invitation)</p> | <p>Discussion Ralph G Stullman, M D, New York</p> <p>3 The Administration of Sulfapyridine and Its Congeners in Pneumonias<br/>Jesse G M Bullowa, M D, New York<br/>Arnold Davidson, M D, New York (By invitation)<br/>Herman Reatish, B S, New York (By invitation)</p> |
|---|--|

## SECTION ON SURGERY

Chairman  
Secretary

Frederick S Wetherell, M D , Syracuse  
Roderick V Grace, M D , New York

Wednesday, May 8—10 00 A.M.  
The Waldorf-Astoria, Ballroom

## PANEL DISCUSSION

## SURGICAL DISEASES OF GALL BLADDER AND BILIARY DUCTS

Henry W. Cave, M D , New York  
William DeWitt Andrus, M D , New York  
Edward R. Cunniffe, M D , New York  
Chas. Gordon Heyd, M D , New York  
C Stuart Welch, M D , Albany

X-Ray Treatment of Inoperable Abdominal  
Malignancy—Is It of Value? A Comparative  
Study

Joe Vincent Meigs, M.D , Boston, Massa-  
chusetts (By invitation)

Members are invited to submit in writing to  
the chairman of the section questions for discus-  
sion on the subject of this panel discussion.

Discussion Donald S Childs, M D , Syracuse,  
and Louis C Kress, M D , Buffalo

Thursday, May 9—10 00 A.M.  
The Waldorf-Astoria, Ballroom

Executive Session—The first order of business, election of officers "To participate  
in the election of any Section, a member must be registered with such Section and must  
have recorded his name and address in the Section registry" Bylaws, Chapter XIII,  
Section 3

- 1 Experiences of the Thyroid Clinic of a  
General Hospital  
William Crawford White, M D , New York  
Discussion Alfred H. Noehren, M D ,  
Buffalo
- 2 Results After Ileocolostomy with Exclusion  
for Nonspecific Ileitis

Ralph Colp, M D , New York  
Discussion Thomas H Russell, M D ,  
New York

- 3 Diagnostic and Therapeutic Uses of the  
Miller-Abbott Tube in Surgery  
Octa C Leigh, M D , Fall River, Massa-  
chusetts (By invitation)

## SECTION ON UROLOGY

Chairman  
Vice-Chairman  
Secretary

John E Heslin, M D , Albany  
Leo E Gibson, M D , Syracuse  
Roy B Henline, M D , New York

Wednesday, May 8—10 00 A.M.  
The Waldorf-Astoria, Jansen Suite

Perirenal and Subphrenic Infections  
John H. Powers, M D , Cooperstown

Discussion Leo E Gibson M D , Syracuse,  
and Lisle B Kingery, M D , New York

## SYMPOSIUM

## CARCINOMA OF THE GENITOURINARY TRACT

- 1 Radiation Therapy in Bladder Tumors  
Archie L. Dean, Jr, M D New York
- 2 Refrigeration Treatment of Tumors of the  
Genitourinary Tract  
Augustus McCravey, M D , Philadelphia  
Pennsylvania (By invitation)

- 3 Surgical Treatment of Carcinoma of the  
Bladder  
James T Priestley, M D , Rochester  
Minnesota (By invitation)  
Discussion on Symposium Abraham Hy-  
man, M D New York, Judson B Gilbert  
M D , Schenectady, and William R. Delzell  
M D , New York

Thursday, May 9—10 00 A.M.  
The Waldorf-Astoria, Jansen Suite

Executive Session—The first order of business, election of officers "To participate  
in the election of any Section, a member must be registered with such Section and must  
have recorded his name and address in the Section registry" Bylaws, Chapter XIII,  
Section 3

- 1 Papillary Carcinoma in a Horseshoe Kidney  
John S. Fitzgerald, M.D , Utica
- 2 Sterility in the Male

Robert S Hotchkiss, M D , New York  
Discussion John B Horner, M D , Albany,  
and William J Kennedy, M.D , Gloversville

- Discussion Joseph P Garen, M D, Saranac Lake, and Frederick S Wetherell, M D, Syracuse
- 4 The School Physician  
George M Wheatly, M D, Astoria
- 3 The Citizen  
Kenneth D Widdemer, New York (By invitation)
- Discussion Cyrus H Maxwell, Jr, M D, Albany, and Don W Gudakunst, M D, New York (By invitation)

### Thursday, May 9—10:00 A.M.

The Waldorf-Astoria, Le Perroquet Suite

**Executive Session**—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

- 1 An Outbreak of Typhoid Fever Associated with Trailer Camps  
Paul A. Lembcke, M D, Rochester
- 2 Tuberculosis in Young Women  
Robert E Plunkett, M D, Albany
- Discussion Herbert R Edwards, M D, and James Burns Amberson, Jr, M D, New York
- 3 Pneumonia and Sulfapyridine  
Maxwell Finland, M D, Boston, Massachusetts (By invitation)
- Discussion Edward S Rogers, M D, Albany, and Richard H Bennett, M D, Brooklyn
- 4 Epidemic Hazards in War  
Frank G Boudreau, M D, New York (By invitation)

### SECTION ON RADIOLOGY

Chairman

Henry K Taylor, M D, New York

Vice-Chairman

Martin T Powers, M D, Utica

Secretary

Chester O Davison, M D, Poughkeepsie

### Monday, May 6—2:00 P.M.

The Waldorf-Astoria, Empire Room

- Address The Practice of Radiology  
Henry K. Taylor, M D, New York
- 1 Fluorography—Its Technic and Application  
I. Seth Hirsch, M D, New York
- Discussion Herbert R Edwards, M D, New York
- 2 Contrast Curoentgenography of the Circulatory Organs
- William H Stewart, M D, New York  
Herbert C Maier, M D, New York
- Discussion Marcy L Sussman, M D, New York
- 3 The Use of X-Ray in the Management of Certain Surgical Problems of the Vascular System  
Arthur H. Blakemore, M D, New York
- Discussion Paul C Swenson, M D, New York

### Tuesday, May 7—10:00 A.M.

The Waldorf-Astoria, Empire Room

**Executive Session**—The first order of business, election of officers "To participate in the election of any Section, a member must be registered with such Section and must have recorded his name and address in the Section registry" Bylaws, Chapter XIII, Section 3

### ROUND TABLE

#### THE PRESENT STATUS OF THERAPY IN NEOPLASTIC DISEASES—AN ATTACK UPON UNDIFFERENTIATED CELL ACTIVITY FROM THE PHYSICAL STANDPOINT

- 1 Clinical and Physical Aspects of Refrigeration  
Temple S Fay, M D, Philadelphia, Pennsylvania (By invitation)
- 2 Pathologic Aspects of Refrigeration  
Lawrence W Smith, M D, Philadelphia, Pennsylvania (By invitation)
- Discussion Ross Golden, M D, Fred W Stewart, M D, Lloyd F Craver, M D, George T Pack, M D, William Harris, M D, New York, and Mrs Edith H Quimby, New York (By invitation)

Members are invited to submit in writing to the chairman of the section questions for discussion on the subject of this Round Table.

Frederic W Bancroft, M D , Attending Surgeon, City Hospital, New York

Frank B Berry, M D , Attending Surgeon, Bellevue Hospital, New York

Henry K. Beecher, M D , Director of Anesthesia, Massachusetts General Hospital, Boston (By invitation)

Frederick W Geib, M D , Attending Neuro-Surgeon, Rochester General Hospital, Rochester

Harold E Himwich, M D , Professor of Physiology, Albany Medical College, Albany

Milton C Peterson, M D , Attending Anesthetist, New York Post-Graduate Medical School and Hospital, New York

Raymond J Pieri, M D , Attending Obstetrician, Syracuse Memorial Hospital, Syracuse

S LeRoy Sahler, M D , Chief Anesthetist, Rochester General Hospital, Rochester

George H. van Gilluwe, M D , Attending Anesthetist, Metropolitan Hospital, New York

## Scientific Exhibits

The Waldorf-Astoria, May 6, 7, 8, 9, 1940

William A Krieger, M D , *Chairman*, Poughkeepsie, Byron E Farwell, M D , New York, and Secretaries of Sections and Sessions

1

C R. Straatsma, M D  
New York Post Graduate Hospital  
New York

PLASTIC SURGERY Exhibit will consist of photographs and casts depicting various types of plastic procedures and their end results

2

Jacques W Maliniac, M D  
Department of Plastic Surgery  
Sydenham Hospital  
New York

PLASTIC AND REPARATIVE SURGERY OF POST-TRAUMATIC DISFIGUREMENTS Exhibit of charts, diagrams, photographs, and casts illustrating technical procedures and end results in the repair of early and late soft tissue injuries and facial bone fractures Special emphasis is placed on preventive measures in the treatment of these injuries Following deformities to be discussed lacerations and burn scars, early and late nasal, jaw, and paraorbital fractures, post-traumatic disfigurement of eyelids, lips, and ears

3

Albert A. Cinelli, M.D  
Manhattan Eye, Ear and Throat Hospital  
New York

PLASTIC SURGERY OF EAR, NOSE AND THROAT Detailed colored illustrations demonstrating the technic of the various rhino, oro, oto, pharyngo, and laryngo plastics

4

Samuel L. Scher, M.D  
New York Polyclinic Medical School and Hospital  
New York

GENERAL PLASTIC SURGERY Will depict all types of plastic surgery, such as skin grafts for burns of face, pedicle flap for absence of ear, nose and chin plastics, mamoplastic operation, skin grafts for birthmarks of face, eyelid plastic, protruding ears, etc

5

Gustave Aufricht, M.D  
New York Post Graduate Medical School and Hospital  
New York

PLASTIC AND RECONSTRUCTIVE SURGERY Photographs, transparencies, moulages, and diagrams showing a variety of cases and operative procedures in the field of plastic and reconstructive surgery

6

Robert M. Crist, M.D  
Division of Cancer Control  
State Department of Health  
Albany

THE ACTIVITIES OF THE DIVISION OF CANCER CONTROL, NEW YORK STATE DEPARTMENT OF HEALTH An illuminated map showing the locations of tumor clinics already established and those under consideration the amount of deep therapy apparatus and amount of radium available in New York State Also a panel showing duplicates of cancer reporting cards with reasons for making such reports and a panel showing aims and purposes of the Division

7

Edward S Godfrey, Jr, M D  
Louis C Kress, M.D  
State Department of Health  
Albany

DIVISION OF CANCER CONTROL It will portray by exhibits, the aims and workings of the new Division of Cancer Control

8

Maxwell Maltz, M.D  
Beth David Hospital  
New York

RECONSTRUCTIVE SURGERY, NEW METHOD OF SKIN GRAFTING REPAIR OF DEFORMITIES Repair of deformities of face and body including a new method of skin grafting



SYMPOSIUM  
UROLOGIC DISEASE AND HYPERTENSION

- |  |  |
|--|--|
| 1 Relation of Kidney to Blood Pressure<br>Herman O Mosenthal, M D, New York                      | Ernest M Watson, M D, Buffalo<br>Nathaniel Kutzman, M D, Buffalo   |
| 2 A Urologic Study of Diabetic Women—A<br>Report on the Associated Findings of Hyper-<br>tension | Discussion on Symposium William C.<br>Eikner, M D, Chifton Springs |

## SESSIONS

Session meetings shall begin promptly at the hour specified

### SESSION ON PHYSICAL THERAPY

Chairman	Madge C L McGuinness, M D, New York
Secretary	Harold J Harris, M D, Westport

Wednesday, May 8—10 00 A.M.

The Waldorf-Astoria, Assembly Rooms J, K, L, M

Address The Role of Physical Therapy in the Early Treatment of the Injured Workman	Madge C L McGuinness, M D, New York
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### ROUND TABLE

#### PREPARING THE DISABLED WORKER FOR RE-EMPLOYMENT

- |  |   |
|--|---|
| 1 Early Use of Physical Therapy in Injury to<br>Minimize the Need for Rehabilitation<br>Measures<br>Clay Ray Murray, M D, New York | 4 Ways and Means of Clearing Chronic Cases<br>Frederic G Elton, New York (By invita-<br>tion)<br>Discussion Robert H Kennedy, M D,<br>New York, Harry Heimann, M D, New<br>York (By invitation), Herman Cowan,<br>M D, New York, and George G Martin,<br>M D, Buffalo |
| 2 Rehabilitation from the Standpoint of the<br>Carrier<br>Mark Butler, M D, Syracuse   |   |
| 3 Rehabilitation and Workmen's Compensation<br>Verne A. Zimmer, Washington, D C (By<br>invitation)                                 | Members are invited to submit in writing to<br>the chairman of the section questions for discus-<br>sion on the subject of this Round Table.  |

### SESSION ON REGIONAL AND GENERAL ANESTHESIA

Chairman	S LeRoy Sahler, M D, Rochester
Vice-Chairman	T Drysdale Buchanan, M D, New York
Secretary	Frederick A D Alexander, M D, Albany

Tuesday, May 7—10 00 A.M.

The Waldorf-Astoria, Blue Room

### PANEL DISCUSSION

#### MODERN ANESTHETIC PROBLEMS

An excellent panel has been secured to conduct the discussion of modern anesthetic problems from the point of view of the anesthetist and of the surgeon. The panel includes outstanding representatives of the several surgical specialties and a physiologist well known for his interest in the fundamental problems of the use of depressant drugs.

The subjects to be considered will include, among others, the present status of cyclopropane anesthesia, anesthetic agents and techniques for chest surgery and for brain surgery, choice of agents and methods for obstetrical anesthesia and analgesia, postoperative pulmonary com-

plications and their management, protection against fire and explosion in the operating room, and the importance of anoxia during anesthesia. These subjects, in the form of specific questions, will be assigned to particular members of the panel for five-minute discussions. The Secretary invites any member of the Society to submit questions in writing before the meeting. In addition, written questions will be accepted during the course of the discussion and at the close of the panel discussion there will be a brief period for questions from the floor. The panel will consist of the following mem-

Frederic W Bancroft, M D, Attending Surgeon, City Hospital, New York

Frank B Berry, M.D, Attending Surgeon, Bellevue Hospital, New York

Henry K. Beecher, M D, Director of Anesthesia, Massachusetts General Hospital, Boston (By invitation)

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RECONSTRUCTIVE SURGERY, NEW METHOD OF SKIN GRAFTING REPAIR OF DEFORMITIES Repair of deformities of face and body including a new method of skin grafting

9

Mortimer M Kopp, M D  
Lutheran Hospital  
Brooklyn

RHINOPLASTIC SURGERY Stereoscopic views of all forms of rhinoplastic surgery Moulages demonstrating subcutaneous structures and surgical operations Graphic drawings illustrating the above

10

Morton I Berson, M D  
Broad Street Hospital, Pan American Clinic  
New York

PLASTIC AND RECONSTRUCTIVE SURGERY Colored photographic transparencies of surgical procedures for (1) Free skin grafts for naevus of face (2) Mammoplasty (3) Corrections of various nasal, facial, and other disfigurements Moulages showing patients before and after corrections

11

Arthur M. Master, M D  
with the collaboration of  
D A. Grisham, M D  
Simon Dack, M D  
Harry L. Jaffe, M D  
Mount Sinai Hospital  
New York

THE FLUOROSCOPIC DIAGNOSIS OF CORONARY OCCLUSION Abnormalities in left ventricular contraction can be observed fluoroscopically in a majority of cases following coronary occlusion The different types of abnormal pulsations are illustrated by tracings, made directly from the fluoroscopic screen by motion pictures of the fluoroscopy and by roentgenograms It is shown that fluoroscopic examination is a useful adjunct in the study of patients with coronary disease

12

Tibor de Cholnoky, M D  
Skin and Cancer Unit, Post Graduate Hospital,  
Columbia University  
New York

SURGICAL TREATMENT OF ADVANCED CANCER Transparencies describing indications, advantages, and results of methods employed Eight years follow up

13

Samuel L Siegler, M D  
Unity Hospital  
Brooklyn

HUMAN STERILITY—(1) ITS CAUSES, INVESTIGATIONS, AND TREATMENT, (2) RELATED STUDIES IN EXPERIMENTAL OVULATION This exhibit includes charts showing the interrelation of the various endocrine glands to the gonads Etiology and diagnostic methods in the investigation of the male and female factors in human sterility In the female, the endocrines and their relation to the tubal, ovulatory, nidatory, and cervical factors are shown in color transparencies In the male, charts and transparencies show the investigation into the endocrine factors and their effect on the sperm. A separate chart deals

with therapy only A résumé of cases and percentages completes the first part. The second part shows the latest information of follicular development and corpora lutea chronology Artificial ovulation in the rabbit, monkey, and the human with the Hormone of Pregnant Mare's Serum Endometrial biopsy studies and the endocrine and physical relationships of the menstrual cycle Chart showing the clinical application of the Hormone of Pregnant Mare's Serum

14

Thomas J O'Kane, M D  
Frederick W Williams, M D  
Morrisania City Hospital  
New York

TRAUMATIC SURGERY AND DIABETES Role of general trauma in causing diabetic complications, also the trauma incident to therapeutic measures, thermal, chemical, mechanical, and surgical Principles of surgical treatment and healing in the presence of diabetes Medico-legal aspect of traumatic injury and industrial surgery in the diabetic Photographic illustrations of the causes, lesions, and results with charts, case histories, and summaries

15

Leo Wilson, M D  
Raphael Kurzrok, M D  
Sloane Hospital for Women  
College of Physicians and Surgeons, Columbia  
University  
New York

CONTRACTIONS OF THE HUMAN UTERUS Photographs of the uterine contractions recorded in the normal menstrual cycle, dysmenorrhea, oligomenorrhea, amenorrhea, and the anovulatory cycle by the intrauterine balloon method The effect of female and male sex hormones on contractility is shown Uterine contractions in pregnancy, labor, and the puerperium recorded by an abdominal tambour Relation of menstrual contractions to pregnancy and labor

16

Medical Society of the County of Queens  
New York

SUMMARY OF CHEST X-RAY STUDIES MADE AT THE 1939 WORLD'S FAIR Statistics of the survey and exhibit of interesting chest x-rays taken on apparently well individuals together with photographs of gross and micropathology collected by Scientific Exhibit Committee of the Medical Society of the County of Queens, not associated with World's Fair visitors

17

Otho C Hudson, M D  
William P Bartels, M D  
Percival A Robin, M D  
Nassau Hospital  
Mineola

DIFFICULTIES IN ROENTGENOGRAPHIC DIAGNOSIS OF ACUTE FROM OLD FRACTURES OF THE BODY OF THE VERTEBRAE A series of trans-lights showing the deformities of bodies of the vertebrae, some of which are old, some recent and others recent but having the appearance of

having old, pre-existing lesions A therapeutic reduction is made to determine the old from the recent injuries

18

Harry D. Vickers, M.D.  
Little Falls Hospital  
Little Falls

**POLIOMYELITIS AND HYPERTENSION** A high incidence of hypertension in young adults found after poliomyelitis Data in chart and graph form on blood pressures of cases studied (about 600 to this date) A paralysis of depressor nerves suggested as possible etiology

19

Moses Einhorn, M.D.  
Bronx Hospital  
New York

(1) A NEW PROCTO-SIGMOIDOSCOPE (2) NEW CARDIOSPASM DILATOR APPARATUS, (3) NASAL AND ORAL BUCKETLESS SIMULTANEOUS GASTRO-DUODENAL ASPIRATOR A review of the American contribution to the development of these instruments

20

Abner I. Weisman, M.D.  
Jewish Memorial Hospital  
New York

**RECENT ADVANCES IN THE STUDY OF SPERMATIZOEA** This exhibit will consist of demonstrations of recent findings in the field of spermatozoa in morphology, motility, resistance, endurance, semen analysis, etc

21

James Finlay Hart, M.D.  
James R. Lisa, M.D.  
C. A. Vicens, M.D.  
City Hospital  
New York

**HYPOLYCEMIA** Diagrammatic charts describing the occurrence etiology, diagnosis contributory factors, and treatment of hypoglycemia obtained in part from the statistics and case histories of the New York City Hospital and in part from literature.

22

Sidney W. Gross, M.D.  
Mount Sinai Hospital  
New York

**CEREBRAL ARTERIOGRAPHY USING AN ORGANIC IODIDE** X-ray films showing the cerebral circulation in normal and abnormal states visualized by means of injecting 75 per cent Diodrast into the common carotid artery

23

Henry K. Taylor, M.D.  
Welfare Hospital  
New York

**BODY SECTION ROENTGENOGRAPHY** The exhibit illustrates x-ray sections of the skull as a whole, petrous pyramids, larynx, chest, and spine. The skull sections are normal The larynx, chest, and spine illustrate many lesions as found in the tuberculous.

24

Arthur Alexander Knapp, M.D.  
New York Eye and Ear Infirmary  
New York

**VITAMIN D COMPLEX IN KERATOCONUS** A drawing and microphotographs will demonstrate the etiology and pathology of conical cornea Results of treatment will be shown by display of approximately 65 plaster of paris casts of eyes with keratoconus Every cone will be accurately measured Improvement following therapy can be seen

25

David E. Ehrlich, M.D.  
New York Cancer Institute  
Department of Hospitals  
New York

**PENDANT MASTOGRAPHY** A new method of x-raying breasts has been in use for three years Over 200 cases have been examined The exhibit illustrates the method and shows x-rays of cases, among which are cysts, benign and malignant tumors and inflammations

26

Albert F. Goodwin, M.D.  
Eugene Littauer Memorial Laboratory  
Nathan Littauer Hospital  
Gloversville

**PHOTOGRAPHIC HAEMOCYTOMETRY** Series of photomicrographs, photographic halos permanent record prints, stained and unstained blood smears of comparative normal, macrocytic, normocytic, and microcytic anemias The unstained blood smears are arranged for visual observation of the halo Those desirous of a permanent record of their interesting blood smears may secure them on request.

27

David Adlersberg, M.D.  
Irving Rapfogel, M.D.  
Ernst Hammerschlag, M.D.  
Nutrition Clinic, Mount Sinai Hospital  
New York

**OBESITY AND MALNUTRITION** Presentation of graphs, tables and photographs demonstrating the various types of exogenous and especially endogenous obesity, changes of metabolism, classification of cases, problems and results of treatment, endocrine causes of malnutrition, malnutrition due to deficiency diagnostic procedures and classification, nutritional problems, results of treatment.

28

John P. Stump, M.D.  
Miles C. Krepela, M.D.  
Stanley F. Stockhammer, M.D.  
Gouverneur Hospital  
New York

**MAINTAINING REDUCTION IN OBLIQUE FRACTURE OF THE LONG BONES** A simple method of maintaining reduction in oblique and badly comminuted fractures of long bones is portrayed The method consists of the use of a single Kirschner wire above and below the fracture, holding the wires in place with small tautening bolts and plaster of paris casts

29

Dante P Dapoloma, M D  
Stanley F Stockhammer, M.D  
Ralph B Elias, M.D  
Gouverneur Hospital  
New York

RUSSELL TRACTION TREATMENT OF FRACTURES Photographs of various fractured femurs before and following use of Russell traction and end results

30

Carl A. Peterson, M D  
Walter D Ludlum, Jr, M D  
Miles C Krepela, M D  
Gouverneur Hospital  
New York

MORTALITY IN HEAD INJURIES Charts presenting statistics of 140 consecutive cases of head injuries with descriptive outlines, drawings, and x-ray reproductions

31

Walter D Ludlum, Jr, M.D  
Ralph B Elias, M D  
Abraham Katz, M D  
Gouverneur Hospital  
New York

CLOSED REDUCTION OF FRACTURES Charts, reproductions of x-rays, reduction and maintenance materials illustrating methods used in 1,600 consecutive fractures

32

Miles C Krepela, M D  
Abraham Katz, M D  
Gouverneur Hospital  
New York

USE OF TRACTION IN FRACTURES OF THE HUMERUS X-rays and diagrams illustrating types of traction at various fracture levels

33

Lauritz S Ylvisaker, M. D  
Henry B Kirkland, M D  
Prudential Insurance Company  
Newark, New Jersey

TUBERCULOSIS AND EMPLOYMENT X-rays illustrating plan of an active chest service for the purpose of controlling and eliminating tuberculosis among employees of a large business organization. Stress is laid on early diagnosis by pre-employment and voluntary periodic examinations, study of contact cases, and observation of individuals developing symptoms suggestive of pulmonary disease. A rehabilitation program is emphasized, including sanatorium treatment, part-time work during postconvalescent period, and close supervision to determine work capacity, prevent recurrence, and protect others Results of a six-year experience with the plan are presented.

34

William G Exton, M.D  
Anton R. Rose, Ph.D  
The Prudential Laboratory and Longevity Service  
The Prudential Insurance Company  
Newark, New Jersey

ONE HOUR RENAL CALCULATION TEST Exhibit describes a simple and convenient test, of renal function and organic states, by wall charts which explain certain relations of nephrons to urinalysis, and sample of urine to nephron mechanics on which the test is based Data illustrating results are also shown with demonstrations of short simple method for determining albumin and globulin in blood and urine and counting the formed elements in urine.

35

New York State Medical Library  
State Education Department  
Albany

NEW YORK STATE MEDICAL LIBRARY Posters, books, and journals A representative of the library will be present to answer all questions concerning the services of the library

36

Joseph J Berkowitz, M D  
Flower and Fifth Avenue Hospital  
New York

STERILITY AND INFERTILITY ITS MANAGEMENT IN GENERAL PRACTICE Charts, drawings, salpingograms, instruments, and specimens illustrating the examination and treatment of the male and of the female in the management of the childless couple

37

Richard Grimes, M D  
Alfred Angrist, M D  
Queens General Hospital  
Office of the Chief Medical Examiner  
New York

DEMONSTRATION OF FORMS OF INTRACRANIAL HEMORRHAGE Sixty mounted large Kodachrome natural colored transparency photographs of the varying types of traumatic and medical hemorrhages found intracranially in the routine autopsy material, covering approximately 800 cases during the year, with clinical correlation

38

Alfred Angrist, M D  
Alfred Schwarz, M D  
Jewish Memorial Hospital  
New York

SURVEY AND EVALUATION OF PREGNANCY TESTS Charts analyzing principles involved in presentation of all tests for pregnancy, including recent Hogben test with demonstration

39

Milton S Lloyd, M D  
Flower and Fifth Avenue Hospital  
New York

CANCER OF THE BRONCHUS ENDOSCOPIC FINDINGS IN RELATION TO PHYSICAL AND X-RAY SIGNS Color drawings of bronchoscopic views in typical cases with characteristic resultant physical signs Color drawings and chest x rays of characteristic cases prepared as lantern slides and exhibited in a special viewing box

40

Benjamin Jablons, M.D.

J L Miller, M.D.

C L Royster, M.D.

First Medical Division, City Hospital  
New York

**EFFECT OF PHYSICAL MEASURES ON CIRCULATION IN PERIPHERAL VASCULAR DISEASE** Effect of physical measures on peripheral circulation in normals and in peripheral disease, as shown by changes in surface and muscle temperatures, oscillogrammograms, and arteriographs Rehabilitation studies in Thromboangitis Obliterans and Peripheral Arteriosclerosis

41

William A. Schonfeld, M.D.

Endocrine Clinic, Neurological Institute  
Columbia-Presbyterian Medical Center  
New York

**MANAGEMENT OF MALE PUBERTY** (A) On the basis of measurements of the Genitalia (specially devised gages used) and the evaluation of the 2° sex characteristics of 1,500 normal boys from 1 day to 21 years of age, the range of normal was determined. (B) A large series of Pseudo-Froehlich Syndromes was followed for 3 to 6 years with photographs and measurements until the advent of puberty using Time-Diet and Thyroid. (C) Differential diagnosis of above cases of the Froehlich Syndrome and Eunuchoidism (25 cases) with appropriate treatment and results using Hormone Therapy

42

Abraham Kaplan, M.D.

Mount Sinai Hospital  
New York

**HEAD INJURIES** Charts and case studies of head injuries seen at the leading hospitals in New York City X-ray films and air studies of cerebral injuries Photographs of specimens

43

Philip D Allen, M.D.

New York and Brooklyn Regional Fracture  
Committee  
New York

**THE NEW YORK AND BROOKLYN REGIONAL FRACTURE COMMITTEE** Posters demonstrating how to transport a patient with a suspected fracture of the spine. Also posters emphasizing the value of accurate follow-up systems in all hospitals treating fractures

44

Samuel S Rosenfeld, M.D.

Bernard Lapan, M.D.

H. Barron, M.S.

Jewish Memorial Hospital  
New York

**STUDIES IN HABITUAL ABORTION** Mounted specimens and microphotographs demonstrating effects of blood serums from normal females and cases of habitual abortion, and conclusions permissible to date on the basis of such studies with particular reference to the application of such findings in therapy

45

Arthur J Barsky, M.D.

Beth Israel Hospital  
New York

**PLASTIC REPARATIVE SURGERY** A photographic and diagrammatic demonstration of the various surgical procedures utilized in the restoration of defects, congenital and acquired

46

A. Benson Cannon, M.D.

Hazel Bishop, A.B.

Vanderbilt Clinic  
New York

**SKIN LESIONS FREQUENTLY FOUND IN GENERAL PRACTICE** Colored lantern slide demonstrations with brief history of cases

47

Henry W Louria, M.D.

Jewish Hospital  
Brooklyn

**THE SURGICAL TREATMENT OF GOITER** Drawings showing the steps of the operation Pathologic specimens Microscopic drawings Charts indicating the mortality, morbidity, and end results

48

Alexander S Wiener, M.D.

Office of the Chief Medical Examiner  
New York

**MEDICOLEGAL APPLICATIONS OF BLOOD GROUPING** Exhibit explains the applications of blood grouping in disputed parentage and for the individual identification of blood stains

49

Herbert R. Edwards, M.D.

New York City Department of Health  
New York

**X-RAY SURVEYS OF APPARENTLY HEALTHY INDIVIDUALS—A LESSON IN FILM FILING** (A) Charts giving the findings in over 200,000 apparently healthy adults x-rayed in routine surveys in New York City since 1938 These groups include high-school pupils, college students, applicants for Civil Service positions, members of labor unions, individuals on home relief, prisoners, and transients and homeless men Transparencies illustrating the types and course of tuberculous lesions found and interesting nontuberculous conditions (B) Chart comparing filing of x-ray film in the conventional three-drawer cabinet, open shelving, and by photography on 35 mm film, showing the saving of 98 per cent of the filing space by the new microfilm method

50

Augustus J Hambrook, M.D.

Subcommittee on Deaf and Hard of Hearing  
Medical Society of the State of New York  
Troy

**NEW YORK STATE COMMISSION TO EXAMINE REPORT UPON AND RECOMMEND MEASURES TO IMPROVE FACILITIES FOR CARE OF HARD OF**

**HEARING AND DEAF CHILDREN AND ADULTS**  
An exhibit to portray services, in the State of New York, available to the hard of hearing and deaf for the conservation of hearing

51

**New York State Commission for the Blind**  
Prevention of Blindness Service  
New York

**PREVENTION OF BLINDNESS EXHIBIT** Series of posters

52

**Registry of Medical Technologists**  
American Society of Clinical Pathologists  
Denver, Colorado

**REGISTRY OF MEDICAL TECHNOLOGISTS OF THE AMERICAN SOCIETY OF CLINICAL PATHOLOGISTS** Exhibit of charts teaching the importance of employment by hospitals and physicians of properly trained registered technologists Charts giving data regarding approved training schools Descriptive literature Blank forms

53

**Theodore Rosenthal, M D**  
Bureau of Social Hygiene  
New York City Department of Health  
New York

**SYPHILIS CONTROL IN NEW YORK CITY** The exhibit depicts the services rendered to the physician in practice, by the Bureau of Social Hygiene of the New York City Department of Health Diagnostic and other facilities are extended to the practitioner to aid him to get and retain patients with syphilis and gonorrhea

54

**Joseph Safian, M D**  
Beth David Hospital  
New York

**TRAUMATIC SURGERY OF THE FACE** An illuminated case of transparent colored film showing various facial injuries and their surgical correction.

55

**Raphael Schillinger, M.D**  
Lutheran Hospital  
Brooklyn

**DIAGNOSIS OF PARANASAL SINUSITIS** This exhibit demonstrates a method for determining the anatomic state of the sinuses and the functional activity of their mucosal lining The method is termed "An Opaque Survey" It employs serial radiography with a contrast medium for the visualization of ventilation, drainage, and pathologic lesions in the sinuses Characteristic filling and emptying data for clinical entities are shown

56

**John B Schwedel, M D**  
Equitable Life Assurance Society  
Montefiore Hospital  
New York

**FIXED POINTS IN CARDIAC FLUOROSCOPY** Radiographs, diagrams, and descriptive matter showing how to recognize and evaluate anatomic landmarks within and about the heart to properly evaluate the size of the individual heart chambers A few anatomic specimens will be displayed

57

**Section on Industrial Medicine and Surgery**  
Medical Society of the State of New York

**SECTION ON INDUSTRIAL MEDICINE AND SURGERY** Various charts and photographs in connection with the talks to be given during the sessions of the Section on Industrial Medicine and Surgery of the Medical Society of the State of New York

58

**Special Committee on Maternal Welfare**  
Medical Society of the State of New York  
**Charles A. Gordon, M D**, Brooklyn  
**James K. Quigley, M D**, Rochester  
**Ferdinand J. Schoeneck, M.D**, Syracuse

**SPECIAL COMMITTEE ON MATERNAL WELFARE** An exhibit designed to show graphically how the problems of maternal welfare are being solved in the various counties in New York State

### Scientific Motion Picture Exhibits

These films will be shown each afternoon in the Empire Room at The Waldorf-Astoria

# Technical Exhibits

The Waldorf-Astoria, May 6, 7, 8, 9, 1940

A L Loomis Bell, M D , *Director* Brooklyn

ONE of the most interesting features of this year's meeting at The Waldorf-Astoria will be the array of selected technical exhibits. A number of our exhibitors are planning to show new equipment here for the first time before any medical group, and an even larger number of new medical preparations will be on display.

For instance, an exhibit of general as well as professional interest will describe a very recent development in the distribution of milk in fiber containers, which is thought to be an important contribution to the protection of public health. Use of these containers is largely confined to the City of New York, but will be introduced rapidly elsewhere and may soon displace the refillable glass bottle. Your patients will be interested in this too.

Below are brief descriptions of many of the exhibits you will find on the ballroom floor at The Waldorf-Astoria. They are selected displays, for there have been eliminated many unrelated to medicine which were present at the last New York City meeting. Every booth has something for you this year. Remember, to inspect each one will be advantageous to you personally, and at the same time represents a courtesy call members of the Society owe to an invited guest.

**Abbott Laboratories (Booth 64)** Here a hearty welcome awaits you and a cordial invitation to drop in and discuss the newer preparations is extended to you. Abbott-Trained Representatives in attendance are well qualified to answer any questions you may have regarding any products shown in this comprehensive display.

**American Can Company (Booth 11)** cordially invites all registrants at the convention to call at the display where information will be available concerning those aspects of commercially canned foods which are of greatest interest to the medical profession. Literature on the health aspects of the American Can Company's new, single-service Paper Milk Container will also be available.

**American Cystoscope Makers, Inc. (Booths 33 and 34)** A cordial invitation is extended to all to visit their exhibit to inspect the first woven ureteral catheters manufactured in America. Nylon, a sensational new duPont product was selected as it possesses ideal characteristics for catheter manufacture. It is nonabsorbent and chemically inert. The A C M I X-Ray and Non X-Ray Woven Catheters may be boiled repeatedly without harm. No known sterilizing agent affects them adversely. Examine them at their display.

**American Hospital Supply Corporation (Booth 40)** You have heard about Baxter Transfuso Vacs and Plasma Vacs which are revolutionizing blood transfusions and blood banking. See them demonstrated in their display. Ex-

amine the Vasoscllator for the conservative treatment of peripheral vascular disease. Among other interesting American specialties is the Dickson Paraffin Bath, designed for adequate accurately controlled heat therapy with melted paraffin.

**The Arlington Chemical Company (Booth 87)** invites you to inspect their line of Proteins and Pollens for diagnosis and desensitization of allergic conditions. Also their new product—Aminoids. Aminoids represents a combination of amino acids and has proved of therapeutic value in malnutrition, underweight and loss of appetite. Dr J H Frazer, in charge of the exhibit, will be happy to answer inquiries regarding this new product and inquiries relative to hay fever, asthma, etc.

**W. A. Baum Co., Inc. (Booth 65)** will display their latest contribution to efficient blood-pressure taking, the Standby Model Baumanometer. This new model is the result of the vast experience gained in a quarter of a century of manufacturing blood-pressure apparatus exclusively. In addition to the Standby Model, the W A Baum exhibit includes the Kompak Model, Smallest, Lightest, Handiest, the 300 Model, ideal for the office desk, and the Wall Model which may be conveniently mounted on the wall of the office or examining room.

**J Beeber Co (Booths 17, 18 & 19)** Be sure to visit the exhibit and see the latest Mattern X-Ray Unit. There will also be a complete line of the latest Diagnostic Apparatus from E-K-G's to elaborate office furniture and many other new items.





**The Borden Company (Booth 4)**  
Full information on Biolac, the new liquid modified milk for infants, will be available at their exhibit. Also on display will be other Borden products for infant feeding, notably Klim, Dryco, Special Dryco, Beta Lactose, Merrell-Soule Products, and Borden's Irradiated Evaporated Milks.



**R. B. Davis Company (Booth 94)**  
Enjoy a drink of delicious Cocomalt at their exhibit. Cocomalt is refreshing, nourishing and of the highest quality. It has a rich content of Vitamins A, B<sub>1</sub> and D, Calcium and Phosphorus to aid in the development of strong bones and sound teeth, Iron for blood, Protein for strength and muscle, Carbohydrate for energy.



**Burroughs Wellcome & Co (U S A.), Inc.** (Booths 71 and 72) presents a representative group of fine chemicals and pharmaceutical preparations, together with new and important therapeutic agents of special interest to the medical profession.

**The Denver Chemical Mfg Co (Booth 79)**

**Cambridge Instrument Company, Inc** (Booths 73 & 74) is showing its Cambridge-Hindle Electrocardiographs and Stethographs—with particular emphasis on its "Simpli-Trol" Portable Electrocardiograph. This little portable operates from the electrical supply and it has an independent time marker. The "Simpli-Trol" weighs only thirty pounds.

**Devereux Schools, Inc. (Booth 85)** The Devereux exhibit enables visiting physicians to become acquainted with the facilities available for children of varying ages, who find it difficult to make an adequate social and scholastic adjustment in regular public or private schools. Representatives at the booth will gladly inform you of the Schools' psychiatric and psychological work. The Schools cooperate with referring physicians by sending reports directly to them for their interpretation to the parents. This service is furnished by the schools for the physician.

**Cameron Surgical Specialty Company (Booth 37)**  
See the new Cameron made Schindler Flexible Gastroscope, the Color-Flash Clinical Camera, the Projectoray and the latest Cameron-Lempert Headlite demonstrated at their exhibit. The Cameron Surgical Specialty Company of Chicago has its local Sales and Service Office at 250 West 57th Street, New York City. Latest developments in electrically lighted Diagnostic and Operating instruments for all parts of the body will be shown. Of special interest will be the new inexpensive office model Radio Knife, Combination Spark-Gap & Tube Electro-Surgical Unit, and other electro-surgical units for cutting, coagulating, desiccation and fulguration in all sizes from the office model up to the hospital unit with sufficient power for major surgery and transurethral prostatic resections.

**The DeVilbiss Company (Booth 35)** The complete DeVilbiss line of medicinal atomizers will be on display. Specially featured in the exhibit will be illustrations showing the superior coverage afforded by the atomizer in the application of solutions to the nose and throat. These illustrations are based on x-ray research. Copies of the illustrations for reference may be secured from Mr. F. L. Graham, DeVilbiss representative in charge of the display.

**Doak Company, Inc (Booth 78)** Physicians interested in unusual preparations for the treatment of skin diseases should visit this exhibit. Colloidal Sulfur, the original preparation as advocated for the treatment of arthritis in many American Publications is also shown at this booth. Reprints obtainable.

**Curvite Products, Inc. (Booth 44)** Curvite, the patented original cold light boillable plastic instruments, has been accepted for use in many hospitals and by leading surgeons and practitioners. Acknowledged an outstanding achievement in modern science, Curvite instruments illuminate operative or diagnostic areas with cold, intense light that passes directly through the instruments into the operative or diagnostic field, providing unobstructed light for all types of surgery.

**E & J Company of New York (Booth 99)** will show the latest development in automatic mechanical respiration, inhalation and aspiration, all combined in a single apparatus. Look for the *Breathing Doll*, and ask for recent reprints from the literature. Other items on display will include the Cooley Compress and the Harger Chemical Breath Test.

**Davies, Rose & Company, Limited, Boston, Mass.** (Booth 76) hope that you will visit their headquarters. The preparations that this firm is exhibiting have a world-wide reputation. Physiological or chemical tests are made to assure their standardization. Clinical experience vouchers for their dependability. Messrs. H. V. Orne and F. L. Moulton will be at the booth to welcome you.

**H. G. Fischer & Co (Booth 69)** are displaying their 1940 models of x-ray and short wave apparatus which are so distinctive that every physician should consider inspection a convention obligation. The complete H. G. Fischer & Co line includes shockproof x-ray apparatus, short wave units, combination cabinets, galvanic and wave generators, ultra violet and infra red lamps and many other units, accessories, and supplies. Physicians attending the convention are invited to ask for demonstrations of apparatus in which they are interested and to consult with Fischer representatives regarding techniques made available by Fischer apparatus.

C. B. Fleet Co., Inc. (Booth 107) Phospho-Soda (Fleet) a saline laxative has been presented to the Medical Profession for over fifty years. This elumant is suggested where a rapid non-gripping action is desired. It is recommended in gall bladder disorders. The Profession is cordially invited to visit the exhibit of C. B. Fleet Co.

The Foregger Co., Inc. (Booth 22) will have resuscitation and anesthesia apparatus including the new O F type anesthesia apparatus on display. The latter will include a new design, specially suited to those requiring small, compact, and inexpensive apparatus. Improved oxygen equipment, including widely known Bullowa Inhaler for nasal administration and a newly designed Oxygen Humidifying outfit, will also be shown.

Gerber Products Company (Booth 77) will display ten new foods which have just been added to the Gerber Foods. Copies of both the professional literature and the booklets for mothers are there for your examination and will be sent to you on request.



J. E. Hanger, Inc. (Booth 55) will display new type duralumin metal limbs showing various stages of construction. Demonstration by limb wearer of the patented hip control leg with adjustable friction knee joint and automatic locking and unlocking of knee at each step. Simplicity of design, natural appearance, and lightness in weight will be featured.



Harold Surgical Corp. (Booth 58) Trained technicians will be available at the display to give you full information on all aspects pertaining to electrocardiography and other types of electro diagnostic and therapeutic equipment. They will feature the Beck-Lee Electrocardiograph and other physiotherapy equipment including short-wave apparatus and quartz lamps.

H. J. Heinz Co. (Booth 23) Physicians interested in prescribing for feeding—especially of infants, older children, or adults requiring soft diets—will be interested in the new Heinz exhibit where Strained and Junior Foods are attractively displayed. The Heinz representative in attendance will be happy to supply information on these foods.

Paul B. Hoeber, Inc. (Booth 15) will display for the first time *Treatment of Cancer and Allied Diseases* in 3 volumes by 147 international authorities, edited by Doctors Pack and Livingston. Among the other new Hoeber books shown will be Alvarez' *An Introduction to Gastro-Enterology*, Reynolds' *Physiology of the Uterus* and Warren's *Handbook of Skin Diseases*.



Holland-Rantos Company, Inc. (Booth 53) Physicians interested in gynecological specialties should be sure to visit the exhibit of the Holland-Rantos Company. On display will be their various vaginal diaphragms, the Koromex, the H-R Mensinga, and the H-R Matrisalus Cinquarsen, the treatment of Trichomonas Vaginalis Vaginitis will also be demonstrated, as well as the new Hollandex textile line of garments and bedding.

Horlick's Malted Milk Corporation (Booth 54) Nourishing, digestible, appetizing—these are the three outstanding qualities for which Horlick's is famous, whether in powder or tablet form. Visit the exhibit. You will be interested in the many uses from infant feeding to old age. Note especially the convenience of the tablets in ulcer diets.

Hospital Liquids, Incorporated (Booth 70) Manufacturers of Ampules, Vials, Biologicals and Intravenous Solutions in Filtrair Dispensers will display their products, with competent and qualified representatives in attendance to explain the advantages of Intravenous Solutions in Filtrair Dispensers and the new Transfusion Haem-o-Vac Blood Transfusion Set in connection with Haem-o-Vac containers and Filtrair dispensers.



Jones Metabolism Equipment Co. (Booths 26 and 27), invites you to see the original waterless metabolism apparatus. The exclusive features of the Jones include a double slope tracing which eliminates the possibility of technical errors, a simplified and accurate slide rule for calculations, and the life-time guarantee of accuracy greater than 99 per cent. The 20 years of experience of the Jones Metabolism Equipment Company have made it possible for them to produce a foolproof, simple, and accurate machine.

"The Junket Folks," Chr. Hansen's Laboratory, Inc., Little Falls, N. Y. (Booth 7) will have a graduate dietitian in attendance at exhibit. Free servings of rennet custards made with "Junket" Rennet Powder and "Junket" Rennet Tablets. Authoritative literature describes the action of the rennet enzyme on milk and the place of rennet-custards in the diets of convalescents, postoperative cases, invalids, infants, children, etc. Display of "Junket" Brand Food Products.

Kalak Water Co. of New York, Inc. (Booth 90) At the display you will find Kalak, the crystal clear, sparkling, alkaline mineral water that has been the first choice of the doctor for over a quarter of a century. Drop around and discover how pleasant tasting and refreshing Kalak is when served properly chilled. Don't get confused—there are no sulfates in Kalak, it is not a laxative. It is acid-neutralizing and mildly diuretic.

Kemp Sun-Ray Co. (Booth 82)

**Lederle Laboratories, Inc** (Booth 5) will feature their Pollen Extracts for Hay Fever. Other products to be displayed are the recently announced Bellabulgara for the treatment of post-encephalitis, Parkinsonism and other syndromes of chronic encephalitis, the two outstanding Lederle vitamin products Vi-Delta (Vitamins A and B) and Vitamin B Complex, as well as their standard products for pneumonia, allergy and contagious diseases. A staff attendant will be in charge.

**Lepel High Frequency Laboratories, Inc.** (Booth 51) present their latest short wave apparatus of both tube and spark gap operated types, all of which were designed by E V Lepel whose name has been foremost in high frequency circles for over 30 years. Lepel ultra violet lamps and low voltage equipment, Dierker colonic apparatus, and various accessories are also on display.

**Libby, McNeill & Libby** (Booth 10) will feature a novel presentation of the story of Libby's specially Homogenized Baby Foods and Libby's Homogenized Evaporated Milk. A marionette stage occupies a prominent position in the booth. The action of the puppets is synchronized with a sound slide film so that the story is both pictorial and verbal. Doctors hear the story by listening in at handily placed cradle telephones. This presentation is supplemented by illuminated photomicrographs and displays of the Libby products which are being so widely used in infant feeding.

**The Liebel-Flarsheim Co** (Booth 43) You are invited to inspect the complete line of electro-medical and electro-surgical apparatus, including the well-known Liebel-Flarsheim Short Wave Generators, the famous Bovie Electro-Surgical Units, the Hypertherm Fever Cabinet and Raysun Therapeutic Lamp. Be sure to see this apparatus and have it demonstrated to you at their exhibit.



**Ell Lilly and Company** (Booth 95) produced the first commercial preparation of Insulin, contributed to development of liver therapy and has been responsible for many other therapeutic advancements. Information concerning all Lilly products will be available at the Lilly exhibit where 'Merthiolate' (Sodium Ethyl Mercury Thiosalicylate, Lilly), 'Sodium Amytal' (Sodium Iso-amyl Ethyl Barbiturate, Lilly), and other important products will be featured.

**J B Lippincott Company** (Booth A) Among the interesting Lippincott publications on display will be Kugelmass' *Newer Nutrition in Pediatric Practice*, and Becker and Obermayer's *Modern Dermatology and Syphilology*. Of similar importance is *Functional Disorders of the Foot* by Dickson and Diveley which has gone into a second printing within five months of publication. Other interesting works include Thorek's *Modern Surgical Technique*, Rigler's *Outline of Roentgen Diagnosis*, Barboraka's *Treatment by Diet*, and many others.

**Laster Bros Inc** (Booth 108)

**The Maltine Company** (Booth 96) will feature Maltine With Cod Liver Oil, prescribed with confidence by physicians for sixty five years. This Council Accepted product, advertised to physicians only, is known for its unvarying high quality and for its natural vitamin content. Of especial interest is the recent 25 per cent reduction in its cost.

**McIntosh Electrical Corporation** (Booth 16) Old customers and friends of the McIntosh Electrical Corporation will find a welcome at their exhibit. The No 8870 Brevatherm, the new De Luxe Model Brevatherm with grid control, McIntosh Polysine Generator, Biolite infra red lamps, and accessories will be displayed. Mr K A Love, New York State Sales Manager, will preside.

**T H. McKenna, Inc.** (Booth 68) will have on display a representative selection of the more important books of all publishers. Here you may examine all of the more important recent books on each subject and compare their relative merits. This gives you an opportunity to do all of your book shopping at one place and under impartial surroundings.

**Mead Johnson & Company** (Booths 41 & 42) will exhibit several new products in addition to Dextro-Maltose, Pabulum, and Oleum Percomorphum. They will also have on display various examples of the slogan "Servamus Fi dem"—We Are Keeping the Faith.

**Medical Film Guild** (Booths 20 & 21), Producers and Distributors of Medical Films that Teach. This year this organization is stressing its service to program committees in regional medical societies interested in exhibiting medical motion picture films. Interesting clinical diagnostic, and surgical films, many in color and sound, may be previewed here for your next season's meetings. Your photographic problems whether the production of a teaching film, selection of a camera, or design of a photographic unit will be answered by this group of photographic specialists. The Medical Film Guild operates a camera shop to complete its service to the medical profession.

**Melrose Hospital Uniform Company** (Booth 109) extends a cordial invitation to all members of the New York State Medical Association to visit their exhibit where they will display a wide selection of new styles in uniforms, coats, gowns and other apparel worn by physicians as well as specialties used by the hospitals. Become acquainted with Melrose merchandise. You will take Pride In Possession.

**Mutual Pharmacal Company, Inc** (Booth 29) will exhibit products of their laboratory at their display during the May meeting of the Medical Society of New York. Physicians are cordially invited to visit the booth. Samples and literature on items of present day interest will be distributed.

Nestlé's Milk Products, Inc. (Booth 30) extends a cordial invitation to all physicians interested in infant feeding to visit their exhibit. Lactogen, which for more than fifteen years has given successful results in infant feeding, is featured in this attractive display.

The New York Medical Exchange (Booth 38 in the Jade Room) Speaking of Service—The New York Medical Exchange is ready to help you with any of your personnel problems. Whether you are seeking the services of a physician, a nurse, technician, or secretary, or an opportunity for yourself, Patricia Edgerly, the Director, will help you.

Paine Hall School (Booth 66) Doctors Attending Convention! A Medical Secretary will be at your service during your entire stay by courtesy of Paine Hall. At the exhibit personable and efficient students who are trained in Laboratory Technique, Office and Secretarial duties, will prove the indispensability of our Medical Assistants to every Physician.

*Paine Hall*

Parke, Davis & Company (Booths 2 and 3) will feature in their exhibit the sex hormones, Theelin and Theolol, antisyphilitic agents, such as Mapharsen and Thio-Bismol, posterior lobe preparations, including Pituitrin, Pitocin, and Pitressin, and various standardized biological products.

Pediforme Shoe Company, Inc. (Booth 56) Pediforme Shoe Company officials will demonstrate prescription features of preventive, protective, and corrective footwear construction for a variety of foot and body motor problems. Appointments will be made for educational cooperation with the profession at colleges, hospitals, and other medical institutions.



Petrolagar Laboratories, Inc. (Booth 89) offers, in addition to samples of the Five Types of Petrolagar, an interesting selection of descriptive literature and anatomical charts. Ask one of the Petrolagar representatives to show you the new Habit Time booklet. It's a welcome aid for teaching bowel regularity to your patients.

Philip Morris & Co., Ltd., Inc. (Booth 14) will demonstrate the method by which it was found that Philip Morris Cigarettes in which diethylene glycol is used as the hygroscopic agent, are less irritating than other cigarettes. Their representative will be happy to discuss researches on this subject, and problems on the physiological effects of smoking.

E. W. Pike & Company (Booth 57) will exhibit the "Flash-O-Lens" an illuminated magnifier, also their line of low-powered microscopes. They are ideal for the quick and accurate inspection of skin, scalp, wounds, etc.

The Prometheus Elec. Corp. (Booth 48) will exhibit a complete line of sterilizing equipment, operating lights and infra-red lamps. There are many new improved models demonstrated for both the physicians and the institutions.

Radium Chemical Company, Inc. (Booth 32) cordially invites physicians to visit their exhibit of instruments for the handling and application of radium and radon, including some attractive new features that will be explained. Representatives in attendance will be prepared to discuss with physicians their radium and radon requirements, and to outline a leasing service whereby physicians may obtain continuous possession of any desired quantity of radium at a nominal monthly fee with no capital investment involved.

The Radium Emanation Corporation (Booth 91) will exhibit a wide variety of instruments and applicators used in modern radium therapy, including permanent and removable composite, leakproof Radon Seeds. The advantages of these seeds will be demonstrated by magnified sections showing their constructions in detail.

Ralston Purina Company, Inc. (Booth 31) cordially invites physicians to register at their exhibit for Obesity Diets giving wide selection of easily prepared foods for the Low Calorie diet. Allergy Diets showing wheat, egg, and milk-free food lists and special recipes. Literature on Ralston Wheat Cereal and its place in the dietary.



Rotophone Corporation (Booth 39)

Sanborn Company (Booth 86) will feature apparatus for the simultaneous registration of heart sounds and electrocardiogram (the Stetho-Cardiette). Also on display, will be the Cardio-scope, for visual electrocardiography, the Cardiette, pioneer portable electrocardiograph, and the 1940 Sanborn Waterless featuring many outstanding advantages in modern metabolism testing.

Saratoga Springs Authority (Booth 47) New York State-owned Saratoga Spa again will serve to delegates Geyser, the famous naturally carbonated, naturally alkaline water of the Spa. Literature descriptive of the Spa and its wide range of therapies, as well as of the other medicinal waters bottled by the State, will be available at their exhibit.

Schering Corporation (Booth 52) Their representatives will be pleased to discuss latest developments in hormone therapy. New products on display will be Cortate (desoxycorticosterone).

acetate), Anteron (gonadotropic hormone from mares' serum), Pranturon (gonadotropic hormone from pregnancy urine), Pranone (orally effective progestin) as well as the other well-known Schering preparations—Progyon-B, Progyon-DH, Proluton, Oreton, and Neo-Iopax

**J Sklar Manufacturing Co (Booth 62)** The Sklar exhibit will feature new suction and pressure apparatus, including the Improved Tompkins Portable Rotary Compressor, the DeLux Tompkins, the new Imperator Apparatus for ear, nose and throat work, Ralks' Ideal Unit and Moorhead Unit for office and clinic, and the new, improved, heavy duty hospital model of the Bellevue Suction and Pressure Unit. In addition, there will be displayed a complete line of Sklar's American Made Stainless Steel Surgical Instruments

**Smith, Kline & French Laboratories (Booths 83 and 84)**, believing that many physicians dislike efforts to make them register, have arranged their booths for self-service. Up-to-date information about Benzedrine Inhaler, Benzedrine Sulfate, Benzedrine Solution, Pentnucleotide, Peosol Tablets and Elixir, Oxo-ate "B," Eskay's Neuro Phosphates and "Paredrine Hydrobromide With Boric Acid Ophthalmic" may be obtained in convenient envelopes from literature dispensers. If additional data is desired, the representative will be glad to answer any questions

**Robert M. Snively Company (Booth 67)** presents the modern Müller Hernia Supports, an advance in the development of an entirely different method of the retention of hernia in nonoperative, preoperative and postoperative treatment. These appliances differ in form, material, and comfort. A booklet "Hernia" published for physicians may be had free at the booth

**E. R. Squibb & Sons (Booth 88)** cordially invite physicians attending the Medical Society of the State of New York to visit the Squibb Exhibit. The complete line of Squibb Vitamin, Glandular, Arsenical and Biological Products and Specialties, as well as a number of interesting new items will be featured. Well-informed Squibb representatives will be on hand to welcome you and to furnish any information desired on the products displayed

**R. J. Strassenburgh Company (Booth 63)** has been purveyors of fine pharmaceuticals to the Medical Profession for fifty-four years. Unusual specialties are indigenous to their Research Laboratories. Visit their booth and investigate Maxtate (Mannitol Hexanitrate), the prolonged vasodilator for Essential Hypertension

**Mr Charles C. Thomas (Booth 1)** will display, among others, the following new books: McLellan's *Neurogenic Bladder*, Barnes's *Electrocardiographic Patterns*, Pancoast, Pendergrass, and Schaeffer's *The Head and Neck in Roentgen Diagnosis*, Roesler's *Atlas of Cardiovascular Diagnosis*, Sulzberger's *Dermatologic Allergy*, Joachim's *Practical Bedside Diagnosis and Treatment*, Steindler's *Orthopedic Operations*, Rankin

and Graham's *Cancer of the Colon and Rectum*, McNeill's *Roentgen Technique*, Collens and Wilensky's *Peripheral Vascular Diseases*, Wiener's *Blood Groups and Blood Transfusion*, 2nd Edition, Hamby's *Hospital Care of Neurosurgical Patients*, Hamblen's *Endocrine Gynecology*

**George Tiemann & Co (Booth 61)**

**U. M. A., Inc. (Booth 36)** show the new improved Collwil Intermittent Venous Occlusion Apparatus at the sensationally reduced price of \$148 complete with two cuffs. This is the original apparatus devised by Drs. Collens and Wilensky. At this price you cannot afford to be without it. U. M. A. is introducing at this meeting the "Collens Sphygmo-Oscillometer"—an invaluable diagnostic instrument which combined a sphygmomanometer with an oscillometer. This unit sells for \$29.50 and is wholly manufactured in the United States

**U. S. Vitamin Corporation (Booth 9)** Vitamins Alone Are Not Enough. Adequate mineral intake is often necessary for proper vitamin utilization. Recent literature, available upon request, substantiates this. The U. S. Vitamin Corporation has long pioneered the interrelationships of vitamins with minerals through Vi-Syneral, the original vitamin-mineral concentrate containing Vitamins A, B<sub>1</sub>, B<sub>2</sub>, (G), C, D, E, and other B Complex factors, fortified with calcium, phosphorus, iron, copper, manganese, magnesium, iodine, and zinc in Funk-Dubn balances

**Vegex Inc. (Booth 60)** The results of two years animal feedings with thiamin, riboflavin, nicotinic acid and B<sub>6</sub> singly and together in a vitamin B complex free ration, without, with and without the full vitamin B complex will be shown. The results from some sixty-one reports from medical research, together with biological feeding tests will show how Vegex contributes to the raising of the red blood cell count and hemoglobin percentage. Simple ways of serving Vegex will be demonstrated

**Myron L. Walker Co., Inc. (Booth 49)** is featuring Copperin—the Wisconsin licensed copper-iron tonic used in the treatment of secondary anemias. Also on display will be Solution Thiamin (Walker), an aqueous solution of Thiamin supplying 100 International units Vitamin B<sub>1</sub> per drop. Other products displayed will be Vitiliver, Mineralized Vitamin Tablets and D<sub>1</sub> Calcium Phosphate with Vitamins B C-D

**The Wander Company (Booth B)**

**White Laboratories, Inc. (Booth 75)** will present for your consideration White's Cod Liver Oil. Here you may obtain complete information concerning the entire field of cod liver oil concentration, with clinical data substantiating the efficacy of White's Liquid, Tablet and Capsule Concentrates

White Sulphur Company of Sharon Springs, N Y, Inc (Booth 28) Sharon Springs, N Y, is famous for hydrotherapeutic treatments such as Sulphur and Nauheim baths, steam massages and Fango mud packs for the relief of pain from arthritis, rheumatism and associated ailments Sharon Springs waters are "beneficial, curative, healing," according to N Y State Mineral Waters Commission.



The Williams & Wilkins Co (Booth 80) are exhibiting the important new books, and all physicians will be repaid by visiting their display and examining them This firm is combined with the old New York house of Wilham Wood & Company The striking feature will be the new three volume set, *Barr—Modern Medical Therapy in General Practice*, with 105 expert therapists contributing

Winthrop Chemical Company, Inc. (Booths 24 and 25) extends a cordial invitation to every member of the Medical Society of the State of New York to visit their display, where representatives will gladly discuss the latest prepara-

tions made available by this firm Available to you are valuable booklets dealing with anesthetics, hypnotics, sedatives, antisyphilitics, diagnostics, diuretics, vasodilators, vitamins, anti-allergics, and others

Worcester Salt Company (Booth 97) will include in the exhibit Worcester Iodized Salt which supplies iodine deficiency in the diet and keeps the thyroid in positive iodine balance A free running salt for all cooking and table purposes Also on display will be Worcester Salt Toothpaste which contains specially powdered salt of very high purity with milk of magnesia and precipitated calcium carbonate The salt mildly stimulates the gums helping keep them firm Taste is refreshing

John Wyeth & Brother, Inc (Booths 92 and 93) cordially invite you to visit the exhibit, where the following specialties will be displayed Amphojel Wyeth's Alumina Gel, for the treatment of peptic ulcer and hyperacidity, Alulotion, Ammoniated Mercury with Kaolin for the treatment of Impetigo, Bepron, Wyeth's Beef, Liver and Iron for nutritional anemia, Kaomagma, for the management of diarrhea and colitis, Bewon Elixir, palatable appetite stimulant and vehicle

# Woman's Auxiliary

To the Medical Society of the State of New York

**T**HE Woman's Auxiliary to the American Medical Association will hold its 18th Annual Convention at the Hotel Pennsylvania, New York City, from June 10 to 14, 1940. *Is Your Reservation In?* We are sure you will

want to stay at the headquarters, Hotel Pennsylvania. In order to get a reservation, mail your request today to Dr. Peter Irving, Housing Bureau, Room 1036, 233 Broadway, New York City.

## County News

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As its contribution to the public health education of the county, the Nassau County Auxiliary sponsored a Mental Hygiene Institute on March 27 at Adelphi College, Garden City. An interesting program was presented. Speakers at the

afternoon session were Mrs. Sidonie Gruenberg, director of the Child Study Association of America, and Dr. Caroline B. Zachry, Progressive Education Association. Colonel H. Edmund Bullis, executive officer of the National Committee for Mental Hygiene, was chairman of the evening session and gave a summary of the afternoon session. Specialists in various fields spoke: education, Mr. A. T. Stanforth, principal of Seawanhauk High School; courts, Judge Johnson of Mineola; medical profession, Dr. Everett Jessop, chairman; public health of Nassau County, public welfare, Dr. C. Milton Meeks; present facilities, Dr. Patricia Steen, psychiatrist at Kings Park Hospital.

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At the March meeting Mrs. William Wright, the president, presided at the Munson-Williams Proctor Institute. Arthur Derbyshire, director of Community Arts in the institute, explained the functioning of the institute. The guest speaker was Ivar Ringdahl, who spoke on Finland. Discussion followed the address.

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Each and every member must contribute something of her time and effort if we are to progress, and if we are to fight against state medicine we must have knowledge, for with it comes power.

Mrs. Packard, our national president, has honored us by accepting our invitation to attend the May 6 session. She will tell us something of the national work, which I am sure will be a treat for us all.

Mrs. Louis M. Lally and her co-chairmen have planned a splendid program, both educational and social. [See page 589.]

Won't you please begin now to make your plans to attend this most interesting and friendly gathering of doctors' wives, so that you too may contribute your mite to this most important work?

MARY T. TOWNE, President

# NEW YORK STATE JOURNAL *of* MEDICINE

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APRIL 15, 1940

NUMBER 8

## *Editorial*

### Tricks of the Trade

At this writing the Goldstein health insurance bill appears doomed. Barred from the front entrance, health insurance is now trying to slip in through the back door, concealed in an amendment to the State Unemployment Insurance Law sponsored by Assemblyman Goldberg.

The proposed addition to the Unemployment Insurance Act would convert the latter into a health insurance measure by authorizing benefits for sickness in specified circumstances. By this tricky device the principle of health insurance, after rejection on its merits in the Legislature, would be sneaked into the statutes in the guise of expanded unemployment benefits.

This is not the first time the friends of state medicine have employed devious routes to attain goals denied them in honest combat. Sectarian healing cults use the same tactics. Chiropractors, naturopaths, physical therapy technicians, and others have repeatedly tried to tack sly amendments on to the Medical Practice Act to enable them to "muscle in" on the lawful practice of medicine.

The antitrust suit against the A M A is the most glaring example in recent years of legal acrobatics to accomplish legislative purposes. As the *Indianapolis Star* has observed: "The feeling persists that the Department of Justice crusade against the national medical organization may have been prompted less by alleged restraint of 'trade' than for the purpose of destroying the independence of the medical profession." Congress did not grant the Administration statutory power to control medical practice, so Mr. Thurman Arnold conceived the bright idea of applying the shackles via the Sherman Antitrust Act—a law never intended to apply to medical practice.

There are apparently more ways than one of effecting legislative aims and the enemies of the existing system of medical practice



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## Medical Equipment and Radio Communication

It is common knowledge that machines for medical and surgical diathermy, the administration of short waves, and some types of roentgenologic outfits produce an interference with radio communication when they are in operation. This at times has proved so serious as to invoke police power to halt the use of the interfering equipment. While now such exercise of police authority is subject to review by the courts, the extent of the complaints against such interference by medical equipment, particularly in the administration of police work, may soon lead the Federal Communications Commission to seek legislation authorizing the correction of any condition that interferes with interstate communication.<sup>1</sup>

While the problem is an acute one, Williams wisely cautions that "the whole subject requires study before mandatory legislation is passed." Engineers, of course, must be the ones to whom the solution will be entrusted, but physicians, whose need for these modalities in the treatment of patients is unquestioned, should also have a voice in the shaping of a remedial statute. Every hospital and practically every physician in private practice has one or more of these offending machines, which would have to be scrapped, if, to make an assumption, a definite frequency band were to be arbitrarily assigned for medical purposes. Furthermore, new equipment built to meet such regulation would necessitate crystal control to assure the assigned frequency and devices to suppress harmonics that would make the cost to the doctor twice what it now is. Shielding the room in which radiating equipment is used has proved satisfactory to a degree, even in the reception of television, but those who would undertake such a procedure must realize that many problems relative to electromagnetic shielding are as yet unsolved by the engineering profession.

Medical men are in hearty accord that the disturbance to communication must be eliminated as a safeguard to public welfare. They feel, however, that a method should be devised that will provide for the continuance of medical radiation without making the hospitals and the doctors bear the brunt of the cost. If the Federal Communications Commission recommends any change in the frequencies now employed by medicine, it should follow the example of the utility companies in our nation. Whenever these companies felt that there was an urgent need for a change in service so that the public in general might benefit therefrom, they themselves shouldered the burden, and the individual lost nothing in service or dollars.

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<sup>1</sup> Williams H B. *Bull Am Coll Surgeons* 23 74 (April) 1940

know all the tricks of the trade. It is to be hoped that neither the State Legislature nor Congress will fall for backhanded attempts to put over revolutionary medical principles found unacceptable when presented in their true guise.

## Better Industrial Health

In a progress report to the Legislature, Commissioner Frieda S. Miller paints an encouraging picture of industrial safety. As a result of medical and chemical surveys and engineering control measures by industrial hygienists in the State Department of Labor, 300,000 workers in dangerous trades are enjoying far greater health safeguards than in the past.

Three and a half years ago the Legislature made a five-year grant of \$50,000 annually to study and control silicosis and other occupational diseases. In the time since, nearly 60,000 medical examinations, chemical analyses, and engineering determinations have been made. As a result, according to Commissioner Miller, silicosis can be prevented to a considerable extent, if not cured.

Although much has been learned about the control of dust diseases, only the surface of effective industrial hygiene has been scratched. This is an almost unlimited field for health improvement. Every new industry brings new problems with the use of new chemicals, new machines, and new processes. The prevention and treatment of resultant injuries and diseases are public health problems of the first magnitude.

That these problems can be solved without enormous expenditures of tax money is shown by the improvements effected since the legislative grant of \$50,000 a year. It is, of course, difficult with the available personnel to enforce all the recommendations made for industrial safety. However, the department has enlisted the support of employers by a policy of collaboration rather than coercion. According to Miss Miller, its industrial hygienists do not seek to prohibit the use of necessary materials but "to control their hazards practically and economically." Their experience has been that most substances in common use can be employed with safety, provided proper ventilation is maintained and unnecessary air contamination avoided.

"As dust control procedures are developed for various industries, they are written into industrial codes." Labor is certainly entitled to this protection against preventable hazards. Those who profess to be interested in workers' health would do better to insist on strict enforcement of these hygienic precautions than to seek the dubious benefits of compulsory sickness insurance.

Do not patients know it? Does the public know the truth? They do not" A sad commentary on the situation, found in a recent issue of the *Bulletin* of the Orleans Parish Medical Society

"Some months ago an eminent physician made the suggestion that good food and proper housing for the 'one-third of a nation' who are in need should take precedence over all other necessities, including medical care. Promptly the medical profession was charged with being opposed to progress and endeavoring to divert public attention from the need for medical services

"Far from being unsympathetic with the underprivileged of our population, the medical profession feels deeply for it. However, physicians are realistic, recognizing that necessities of life must be provided in a common sense manner. The people of this country can be assured that so far as the medical profession is concerned it will see to it that the health needs of all the people are cared for. However, as has been pointed out, the essentials of good health are not limited to medical care but require decent living

conditions"—From the *Medical Annals* of the District of Columbia

. . .

"But in spite of all lacks and unfavorable comparisons the U S is the greatest nation on earth. And its actual greatness rests not on any single asset, but on a combination—a vast land area, a great, resourceful population of diverse origins and talents, an agriculture of such richness that it embarrasses, a universal industry of cosmic dimensions, an enormous treasury of resources—all integrated under a form of government that has stimulated their optimum development.

"And it is significant that all the serious problems that now confront the U S are problems of abundance not poverty. They are problems of maintaining a high standard of living, of an overwhelming desire to keep democracy and make it work. The fact is that the U S is faced with problems different from those in almost any other country in the world, and these problems have their origins in the colossal achievements of the U S"—Some statements to be borne in mind, from the pages of *Fortune* recently

## MEMBERS, ATTENTION

- 1 The Hotel Waldorf-Astoria, New York, has *special room rates* for those attending the Annual Meeting. Make your reservations at once. The rates will hold for the ensuing week-end. Write us, or address the hotel.
- 2 The *Annual Banquet* this year will have some unusual features, and to maintain the element of surprise, little will be said beforehand. The Doctors' Orchestral Society of New York—allied medical groups—short, entertaining addresses—in addition to meeting with friends and associates will make the event memorable. Try to attend. *Write now* for tickets. The seating is limited by the capacity of the hall. First come, first served.

Write to Dr. Chas. Gordon Heyd

Chairman, Banquet Committee

292 Madison Avenue, New York City

(The new address of the State Society)

## Carbon Monoxide Hazard in Aviation

Aviation has created many new problems for medicine. In its embryonic stages, physicians were called upon to determine the ability of a prospective pilot to give normal responses to the visual, vestibular, and auditory tests. As the need for commercial flying increased, the standard for a commercial pilot likewise increased to the point where an acceptable candidate had to meet the acme of physical and mental perfection. A hazard to flying was thus reduced. The continued though occasional mishaps in commercial aviation called for additional safeguards and they were met by perfections in the construction of vehicles and precision instruments for transportation by air. Trivial though they were to the early development of practical aeronautics, the part played subsequently by the studies conducted by biochemists interested in this field has given aviation a further safeguard for commercial transportation.

During a flight, the carbon monoxide of the exhaled air of passengers may assume toxic proportions. For instance, at 10,000 feet altitude, a concentration of 0.01 per cent of carbon monoxide will reduce the capacity of hemoglobin to carry oxygen by 10.5 per cent. This would produce a state of anoxemia, which at sea level would not occur. Thus, what would be innocuous at sea level, may become extremely dangerous at even the moderate altitude of 10,000 feet. Not only is arterial oxygen saturation reduced but the dissociation of oxyhemoglobin in the tissues may be hindered—thus bringing about the phenomena of anoxemia. The higher the altitude, the less the tolerance to these two factors that inhibit normal expansion of commercial flying. According to Heim,<sup>1</sup> therefore, not even a trace of carbon monoxide is to be tolerated in any compartment of an airplane even at so-called moderate altitudes if the health of the passengers and effectiveness of the pilots is to be sustained. The air lines have been the first to appreciate this contribution of medicine to their problem of providing safe transportation, and even a scant perusal of their advances affords sufficient testimonial to our efforts.

<sup>1</sup> Heim, J. W. J. Aviation Med. 10: 211 (1939).

## Current Comment

"We all know of the intensive campaign of propaganda against American medicine. It has been tremendous and somewhat successful. Radio, newspapers, magazines, the postal service, in fact every conceivable means has been used to inform and often to misinform—the believing public. In a nutshell, the Ameri-

can people—our patients—have been led to believe that to pay for medical care would mean a great financial burden for the majority of the populace—and also to believe that doctors are opposed to plans to improve medical care and to make it more available to the indigent. We know the unfairness and the untruth of this

# ROENTGEN-RAY THERAPY OF SKIN CANCER OVERLYING CARTILAGE AND BONE

ANDREW H. DOWDY, M D, Rochester, New York

(From the Division of Radiology, Department of Medicine of the University of Rochester School of Medicine and Dentistry and the Strong Memorial Hospital, Rochester)

THE treatment of skin cancer overlying cartilage and bone, particularly where the cartilage has been invaded by the neoplastic process, presents a problem of vital interest to both the surgeon and the radiologist.

Despite the fact that cancer of the skin occurs most frequently on exposed areas, the face and hands, and that it is readily accessible to observation by both the patient and the physician, large numbers of cases are seen that have neglected to seek treatment until the disease is in an advanced stage. Furthermore, many have been undertreated by the attending physician. Early cases, if properly attacked by either surgery or radiation, should result in cures in a very high percentage of cases. Complete surgical excision is usually a satisfactory procedure but seldom results in the best cosmetic effect. Oftentimes, a complete surgical extirpation of necessity must result in the loss of some prominent feature of the face, such as the ala of the nose or a portion or all of one ear. Adequate roentgen-ray or radium therapy has long been established as an efficacious method of handling skin cancer when it does not involve the cartilage. Recent reports by Merritt and Rathbone<sup>1</sup> and by other clinics<sup>2,3</sup> would seem to indicate that, even though the underlying cartilage is directly involved by the neoplastic process, the disease may be completely eradicated with adequate roentgen-ray therapy. The method of treatment today varies with the various clinics or individuals handling this type of lesion. It has been the prevailing opinion among surgeons that radiation therapy cannot be successfully carried out on a lesion that

overlies cartilage, especially when the cartilage has been invaded. Successful roentgen-ray therapy of such conditions is not even accepted by all radiologists. When roentgen-ray therapy is used, there is a diversity of opinion among radiologists as to the type of radiation indicated.

Some advocate, in general, the use of low-voltage unfiltered roentgen rays<sup>4,5,6</sup>. Others<sup>1,2,7,8,9</sup> recommend the use of highly filtered radiation in selected cases. A number are rather pessimistic about the outcome when cartilage and bone are involved by the neoplastic process<sup>4,6</sup>. Pfahler and Vastine recommended the use of electrocoagulation previous to irradiation<sup>7-9</sup>. There is general agreement that infected cases or recurrent cases offer, in general, a poor prognosis. Dosage systems usually vary over wide extremes. However, massive fractional dosage has been used with good results. Others obtained good results by the use of the simple fractional method<sup>1,7,8</sup>.

In general, adequate irradiation therapy not only results in the complete eradication of the disease but produces a better cosmetic result than can be offered by surgical removal. Most workers in this field agree that inadequate irradiation or inadequate surgery renders subsequent treatment, by whatever method selected, more difficult and the prognosis doubtful.

It is difficult to determine the number of existing cases of cancer of the skin. In 1934<sup>2</sup> there were 3,315 deaths caused from skin cancer out of a total of 134,428 cancer deaths in the registration area of the United States. It has been estimated, however, that in a given area during a given period the total number of cancer

## Supplementary Report of Council—Part III

### Workmen's Compensation

*Payment of Medical Bills*—Section 13-g indicates that unless an employer or insurance carrier objects to a doctor's bill for medical services rendered under the Workmen's Compensation Law within thirty days and demands arbitration of the fairness of the amount claimed by the physician, the bill shall be deemed to be the fair value of the services rendered by the physician. There is no provision in the Compensation Law to enforce the payment of such a bill, if the carrier does not object to it. The physician's only resort is to civil action. Your bureau has had innumerable requests in the past year from physicians all over the state to intervene with employers and insurance carriers to obtain payment of bills to which no objection was made within the thirty-day period, or at any time. It is suggested that the law be revised so as to give to the Industrial Commissioner or the Industrial Board the right to enforce payment of such bills against employers or insurance carriers.

*Arbitration*—Section 2 of section 13-g should also be amended to include a provision for the arbitration of all disputes arising under the provisions of section 13. For example, at the present time if a physician does not submit his reports on time, it is common for insurance carriers to object to such bill and to refuse to arbitrate same under the provisions of section 13-a-4. This makes it necessary for the physician involved to apply to the Industrial Board for an excuse. The Industrial Board is not in a position to give and does not give prompt consideration to the factors involved. Objection by insurance carriers should not be based upon mere technical grounds. The employer or carrier should be forced to prove that the failure of the physician to comply with section 13-a-4 prejudiced him and resulted in serious inconvenience to the claimant and the proper administration of the Workmen's Compensation Law. All these factors could more readily be ascertained and evaluated under the present arbitration procedure.

It is believed that the Department of Labor should be called upon to give consideration to these matters with a view of making the necessary changes in the law. Section 13-a-5 of the law states that no claim for specialist's consultation, surgical operations, or physical therapy procedures costing more than twenty-five dollars shall be valid and enforceable unless these special services shall have been authorized by the employer, or by the commissioner, or unless such authorization shall have been unreasonably withheld, or unless such special services are required in emergency. One of the serious difficulties encountered under the present law is the obtaining of authorization from an insurance carrier or employer for surgical operations in excess of \$25. The physician requesting authorization is usually told by the carrier or employer that under the law the patient has the right to choose his own physician and the physician should proceed without specific authorization. If he is pressed for specific authorization under section 13-a-5, the carrier frequently refuses or

inordinately delays giving authorization especially in a case that has been under treatment for some time or one that is being controverted, for one reason or another, before the Department of Labor. Usually the physician in a case that requires operation, even though a real emergency may not exist, is willing to take his chance in collecting his bill, knowing full well in advance that in most instances the carrier will object to his bill when rendered because no specific authorization was given and force him to arbitration, even if the case is subsequently declared compensable.

The chief difficulty arises because in most of these instances the hospital is not willing to admit a patient without authorization. As there are ample provisions in the law to safeguard the employer and insurance carrier when a bill for medical services is rendered, it is felt that this provision of the law should be changed to remove the necessity for authorization for surgical services costing more than \$25, and require the attending physician to go on record, except in emergency cases, as to the medical conditions present and requiring operation by submitting immediately a special report to the Department of Labor and the employer or carrier. There might also be a provision entitling the employer or carrier to object to the operative procedure contemplated within a stipulated period of time. This might necessitate a review of such disputed cases by the Department of Labor.

This section, 13-a-5, states that the Industrial Commissioner may validate claims for special consultant's, surgical operations, or physical therapy procedures costing more than \$25. So far as is known we have never been able to obtain authorization from the Industrial Commissioner for authorization in any disputed case, no matter what the merits of the case.

Our intervention has been sought frequently by representatives of the Department of Labor in controverted cases where the employer or carrier has definitely objected to operations, which in the opinion of the attending physician were necessary for the claimant's welfare in order that these claimants may receive proper medical care.

We have in most instances been able to induce the attending physician to render the proper medical care despite the risk involved of not collecting his bill in such controverted case should the case subsequently on hearing be declared noncompensable.

In most of these instances, however, we have had great difficulty in having a hospital take a chance, although the representative of the Department of Labor has frequently felt that the interests of the claimant demanded medical care. To the best of our knowledge and belief authorization has never come from the Industrial Commissioner or her representative.

If the above restrictions cannot be removed some provision should be made whereby the Industrial Commissioner should intervene and on proper proof of the necessity of medical care give authorization for same, regardless of the outcome of the subsequent hearing.

TABLE 1.—A SUMMARY OF THE CASES TREATED WITH 200 KV. P AND 2 MM. OF COPPER PLUS 1 MM. ALUMINUM OR ITS EQUIVALENT THORAEUS FILTER

Name	Sex	Age	Biopsy	Duration Before Treatment	Location	Size Diameter	Dose Measured in Air	Duration Since Treatment
1. G S	M	83	Yes Sq cell	3 months	Rt. ear	3 cm.	5 700 r 30 dys.	1 year 6 months
2. E G	M	52	Yes Sq cell	2 weeks	Tragus II ear	1 cm.	5 400 r 23 dys.	1 year 2 months
3. N F	M	41	Yes Sq cell	?	Lf ear	1 cm.	6 700 r 25 dys	10 months
4. F T	M	75	Yes Sq cell	8 months	Lf ear	2.5 cm	5 100 r 23 dys	6 months
5. E P	M	53	No ? Sq cell	2 years	Lf ear	1.0 X .09 cm	5 900 r 28 dys	10 months
6. G R.	M	68	Yes Sq cell	5-6 years	Rt. ear	3 cm	5 700 r 26 dys	8 months
7. J Mc.	M	84	No ? Sq cell	2 years	Lf ear	3.5 X .4 cm	3 600 r 16 dys	2 months
8. G C	M	76	Yes Sq cell	6 weeks	Rt. ala nasa	1 X 1.5 cm.	4 800 r 23 dys	1 year
9. C. P	F	57	Yes Sq cell	1 month	Rt. nasolabial fold	1.5 cm	6 000 r 23 dys.	1 year 5 months
10. H M	M	72	Sq cell Basal cell	1 year	Lf side nose	1 cm	5 700 r 26 dys.	9 months
11. W M	M	71	Yes Basal cell	2 months	Lf side nose	1 X 1 cm	4 200 r 21 dys	4 months
12. P L.	F	45	Yes Basal cell	5 years	Lf nasolabial fold		5 700 r 22 dys.	1 year 7 months
13. A. H	F	75	Yes Basal cell	2-3 months	Lf side nose	1.5 X 1 cm	6 000 r 22 dys	1 year, 3 months

ever possible, the underlying structures were protected with heavy lead rubber. For instance, in the treatment of carcinoma of the ala of the nose a heavy piece of lead rubber was cut and fitted as accurately as possible into the external naris on the involved side in order to protect the nasal septum. If the treatment area extended down over the upper lip, a similar piece of heavy lead rubber was cut to fit beneath the lip to protect the underlying gingival margin. In cases of carcinoma of the external ear, small circular areas of lead rubber were cut and fitted into the external auditory canal. A second piece of heavy lead rubber was cut to fit as accurately as possible around the base of the ear, thus protecting the mastoid process and the squamous portion of the temporal bone. We have found that this added time and care in protection is important for the prevention of unnecessary irradiation of the surrounding normal structures and obviously for the increased comfort of the patient.

The total dosage varied from 3,600 r to 6,000 r depending upon the size of the area. Throughout the entire course of the treatment, the skin reaction, as well as the regression of the tumor, was carefully observed. In practically all cases, treatment was carried to the begin-

ning of moist vesiculation of the surrounding normal skin. No attempt has been made to determine the relative difference in sensitivity between the basal cell carcinoma and the squamous cell carcinoma. It has been our experience, as it has been with numerous others, that basal cell carcinoma of the skin frequently requires as much or even more radiation than do some squamous cell carcinomas.

Marked secondary infection has so far been no contraindication to this type of therapy. A number of our cases, particularly those involving the ear, have had a very marked degree of secondary infection at the onset of treatment. This rapidly subsided during treatment, and long before the treatment was completed the area was free from any obvious infection and also free from the foul odor which usually accompanies these grossly infected lesions. We wish to point out, however, that an infection subsequent to the completion of the treatment, particularly in the cases in which cartilage has actually been invaded by the neoplasm, is a serious handicap and greatly prolongs the period of healing. This will be illustrated by 1 of our cases. As a rule, however, healing is prompt, and complete epithelization of the treated area and tumor bed usually results in



cases is about three times the total number of cancer deaths<sup>2</sup> This is not an insignificant number of cases It seems pertinent, therefore, to discuss the proper handling of cases of skin malignancy involving cartilage or immediately overlying cartilage or bone, since it is my feeling that, in general, a good result may be obtained by irradiation and that, in the main, the problem is one of adequate dosage adjusted to the individual needs of the case From the experience with the cases to be reported here, the use of highly filtered radiation presents no inherent difficulties and has been followed by good cosmetic effects

A preliminary attempt (with Ter Louw and Du Pont, to be reported elsewhere) was made in 1937 to demonstrate a biologic difference in the effect of 200 kv highly filtered radiation and 50 kv unfiltered radiation Two litter-mate white rabbits were given identical daily fractional dosage over a small area in the middle of each ear (the left being used for the longer wavelengths, the right for the shorter wavelengths) The dosage totaled 8,100 r over a period of thirty-four days The reactions were almost identical at first, but a year later the cartilage sloughed under the site receiving the long wavelengths In view of the tremendous biologic variations noted in similar irradiation experiments in this laboratory, it is unwise to draw any conclusions from this limited number of observations until it has been verified by additional work The experiment is being continued and will be reported in detail at a later date

It seems, however, that so far this experiment would indicate that like quantities of irradiation (as measured in air) generated at voltages of 50 kv p and 200 kv p do not give the same biologic results in the ears of two rabbits Whether or not this can all be explained on the basis of absorption we are unable to state A similar rabbit's ear, measuring 1 mm in thickness, was found to have removed 17 per cent of the primary beam generated at 50 kv p and no filter, whereas it absorbed only 3.2 per cent of the primary beam generated at 200 kv p, 2 mm of

copper plus 1 mm aluminum This measurement, however, does not give us any indication as to the amount of actual total energy absorbed Further discussion of this problem is beyond the scope of this paper

## Material

In the past eighteen months in the Division of Radiology, 13 selected cases have been treated exclusively by highly filtered roentgen rays for skin cancer overlying cartilage or bone Six cases had carcinoma of the skin of the nose either overlying the alar cartilage or the nasal bone, and seven cases had carcinoma of the external ear

It should be noted that not all cases of cancer of the skin in this clinic were treated by high filtration and that the reported cases represent a selected group The other cases were treated by the conventional roentgen-ray method or with radium or with a combination of the two A summary of the 13 cases comprised in this report is shown in Table 1

## Technic

No originality is claimed in the presentation of the type of therapy used in this series of cases We simply wish to re-emphasize to the general practitioner, the surgeon, and the radiologist, that this method of treatment<sup>1</sup> seems a safe and practical method of procedure The immediate results have been all that could be expected

The following technical factors were used 200 kv p, 25 ma, 40 cm skin target distance, 2 mm of copper plus 1 mm aluminum filtration, or its equivalent Thoraeus filter These factors give an effective wavelength of 0.133 Å and a half-value layer of 1.6 mm of copper The treatments were given daily, five or six times a week depending upon whether or not the patients were hospitalized or ambulatory

The average daily dose was 300 r measured in air, and a small localizing cone that was sufficiently large to include 1/2 to 1 cm of the normal tissue surrounding the neoplasm was used Where-

lesion had remained unhealed and there was an area of induration about the site of the lesion. Definite evidence of recurrence was present. Over a period of twenty-five days he was given 4,800 r, the size of the area treated being 3.5 cm in diameter. This included all of the alar cartilage on the right side and extended out on the soft tissue of the lip and cheek. Five weeks following the treatment the area was well healed and has remained well now for one year. This case is interesting in that squamous cell carcinoma was excised surgically followed by rapid recurrence which was subsequently treated satisfactorily with high-voltage, highly filtered roentgen rays. The site was unfavorable in that it was directly overlying the alar cartilage and was treated in the presence of an open wound (postoperative).

Case 4—J. S., an 83-year old Italian male whose history was difficult to obtain, had a principal complaint of an infected, discharging ulcer of the right ear of three months' duration. Examination revealed a large infected crater, 3 cm in diameter, involving the middle portion of the external ear. The borders were raised and indurated and the ulcerative crater was filled with a foul-smelling purulent discharge. Biopsy revealed this to be a squamous cell carcinoma involving the right ear. The underlying cartilage of the ear was also eroded and invaded. An area 4 cm. in diameter was treated and 5,700 r were given over a period of thirty days. During the treatment the infection cleared rapidly. We had planned to give the treatment over a period of approximately twenty days, however, due to the uncooperativeness of the patient, several days were missed during the schedule of the treatment. At the height of the patient's reaction, he complained of considerable pain in the right ear, and a nose and throat consultation revealed marked myringitis as a result of treatment. Considerable difficulty was had in the healing of this lesion following treatment owing to the patient's age and uncleanly habits (plus the language difficulty). The area would almost heal and then become reinfected and break down. The patient was finally admitted to the hospital on June 11, 1938, which was approximately nine months following the completion of treatment, at which time a member of the department of surgery cleaned off the necrotic infected cartilage down to a freely bleeding base. The lesion again healed for a time and then became reinfected and again broke down and looked as bad as at any previous time following the completion of treatment. The lesion was then dressed in the Tumor Clinic every other day until the infection completely subsided. The area remained free of

infection and showed continued, progressive healing. On November 15, 1938, the ear was completely healed, fourteen months following the completion of therapy. The ear now remains healed one year and six months since the completion of treatment. This case represents 1 of the most difficult that we have had in this series. It emphasizes the point, previously brought out in this paper, that the treated areas must be kept free from infection during the period of healing. Healing at all times progressed satisfactorily and normally in this case until it became infected, and with each subsequent infection there was a breaking down and superficial sloughing of the cartilage. We have had only 1 other case in the region of the ear that presented such difficulties and that was in an individual who had chronic eczema involving not only his entire ear but both hands as well.

### Summary and Conclusions

While this series of 13 cases of skin cancer near the nose and ear is a small one, the results are uniformly consistent. The underlying cartilage and bone have seemed to escape damage since there have been no changes noted in cases with at least one year of follow-up. In spite of the heavy dosage, the skin has healed, replacing the neoplastic tissue without obvious atrophy. The resulting scar was soft and pliable. Where the cartilage was not actually invaded by the neoplastic tissue, the subsequent scarring was difficult to detect.

The dosage in each case was continued up to the beginning of vesiculation and then terminated. The total varied from 3,600 r to 6,000 r using 200 kv and heavy filtration. Infection already present at the start of treatment is no handicap, for it is controlled and eliminated by the course of treatment. Absence of trauma and infection after the treatment is finished is of vital importance to a rapid and satisfactory healing.

. . .

I wish to express my appreciation to Dr. Stafford L. Warren for his encouragement and very helpful suggestions throughout his study and to Dr. Samuel Stabins and Dr. G. Burroughs Mider for their cooperation in referring a number of these cases from the Tumor Clinic.

three to six weeks time, leaving a soft pliable scar that in many instances escapes detection except by the closest scrutiny. The postirradiation care we feel is most important. More intelligent patients show satisfactory progress if the treated area is bathed twice daily with a sterile 2 per cent soda bicarbonate solution or with physiologic saline and hydrogen peroxide half and half. These areas should be gently bathed and not rubbed. The *slightest amount of trauma* may delay the epithelization, as the young epithelial cells are extremely fragile during the period of healing. After the area has been thoroughly cleaned by gentle sponging, it should be dried and covered with a sterile white vaseline dressing. In the event that itching and burning have been a prominent symptom, vaseline may be mixed with 1 per cent nupercanal ointment half and half. Any scab formation should be carefully observed and completely removed if there is any underlying infection. In the less intelligent clinic patients it may be necessary to have these patients return for dressings as often as two to three times weekly.

### Case Reports

The following 4 case histories give in some detail the procedure and the results in various types of complications.

*Case 1*—C P, a 57-year-old white female, noted a small growth to the right of the nose of one-month duration that had grown very rapidly in size but otherwise had caused no symptoms. Examination revealed a spherical, marble-like tumor measuring approximately 2 cm in diameter at the base just to the right of the nasolabial fold. It was quite firm to palpation, red, and indurated at its base. There was no ulceration. Biopsy revealed a squamous cell carcinoma. This patient received 6,000 r over a period of twenty-three days. The irradiation area measured 3.5 cm in diameter and extended well beyond the area of infiltration at the base of the lesion. The full-sized portal was used until a total of 5,100 r had been given. The portal was then reduced in size to 2.2 cm in diameter and another 900 r given for a total of 6,000 r. Forty-seven days following the treatment the lesion had almost entirely healed, and one month later the lesion was entirely healed with excellent cosmetic results. This lesion has now remained

healed for one year and five months, and observation of the area reveals only a very small pliable scar. It is only with difficulty that one is able to distinguish the site of the original lesion. There is no evidence of atrophy.

*Case 2*—P L, a 45-year-old white female, presented herself on July 7, 1937, with the following history. She first noted a small pimple on the upper lip just under the left ala nasa five years before, at which time it was cauterized by her physician. In the next five years it recurred three times following cautery, and on the fourth recurrence roentgen-ray therapy was given. Following this it again recurred, and one year previous to admission was excised, at which time histologic sections revealed it to be a basal cell carcinoma. Examination at the time of admission revealed an induration extending through the full thickness of the lip to the left of the mid line just beneath the ala nasa. The center of the mass appeared to be cystic, for from this region there exuded a clear fluid. The cartilage of the ala did not appear to be involved. In view of the repeated recurrences and multiple treatment, the patient was advised to have a wide surgical removal with subsequent plastic repair, but she elected to try radiation therapy in preference to this. She was given a total of 5,700 r in twenty-two days with the afore-mentioned technic. The area treated measured 2.8 cm in diameter and extended well out beyond the area of involvement. Twenty-eight days following completion of treatment the lesion was entirely healed with the exception of a very small area in the left nasolabial fold. One month later the lesion was entirely healed, and there was an excellent cosmetic result. There was some thickening in the region of the scar from the previous excision and at the site of the recurrent lesion. The skin was of good quality and of normal color with the exception of a slight brown pigmentation about the periphery of the irradiated field. The lesion has remained healed now for one year and seven months. There is no evidence of atrophy and no appreciable scar.

*Case 3*—J C, a 76-year-old Italian male, presented himself with the complaint of a nodule on the right ala nasa. He had first noted it three weeks previously. It had not ulcerated. The lesion was thought to be benign, and on January 28, 1938 it was surgically removed under local anesthesia. Histologic section of the specimen revealed a squamous cell carcinoma. The patient was discharged, but he returned to the Tumor Clinic six days later, at which time it was noted that the wound was not healing well and that there was an area of sloughing. He returned on February 14, 1938, at which time the

# OTOGENOUS PARIETAL CEREBRAL ABSCESS DUE TO PNEUMOCOCCUS TYPE III

## Recovery After Drainage, Specific Antiserum, and Sulfanilamide. Report of a Case

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**S**OLITARY otogenous abscess of the parietal lobe is rarely encountered clinically, and in autopsy series it constitutes less than 10 per cent of the abscesses of the brain. Courville and Neilson\* in 1935 and 1936 made the first careful study of this particular type of abscess and no attempt is made here to analyze the cases reported in the literature. Apart from the rarity of otogenous abscess in this region, the case to be reported presents several other noteworthy characteristics. The clinical symptoms allowed the lesion to be localized, though ventriculography was used to verify the localization. The causative organism was the *Pneumococcus* type III, the same strain having been isolated previously from the ear of the opposite side. The patient recovered after surgical drainage of the abscess and with the aid of sulfanilamide and a specific antiserum. The recovery was complicated by cerebral herniation of large size that finally subsided without fragmentation but probably contributed to the residual symptoms.

### Case Report

'Recurring left otitis media in a girl of 8 years subsequent jacksonian seizures of the left face and arm, finally left hemiparesis and loss of two-point discrimination in the hand. Extirpation of a large left parietal abscess due to *Pneumococcus* type III, treatment with specific antiserum and sulfanilamide cerebral herniation, recovery with residual signs.'

E. A. J., a pale, underweight girl, aged 8, was admitted to the Buffalo General Hospital on January 7, 1938, complaining of severe right frontal headache and left hemiparesis.

In February, 1937, the patient developed otitis media, and paracentesis of the left drum was necessary. The left mastoid area was sensitive for a week, but the tenderness subsided and she had a fairly good summer, though she complained of occasional mild transient pain in each ear during that time. On October 19, 1937, the child again developed pain in the left ear. A paracentesis was done but no discharge resulted. She subsequently developed an almond-sized swelling over the left mastoid process, and on October 27 this was drained by Dr. John F. Fairbairn. Pus was found external to the perosteum, the bone was inspected and was found to be normal. Furunculosis was present in the external auditory canal. A culture of the pus revealed *Pneumococcus* type III. The child had been given liberal doses of sulfanilamide and the wound was healing slowly.

On November 7 the patient experienced several convulsive seizures starting in the left side of the face and spreading to the hand. These seemed to be both motor and sensory in character, and on at least one occasion the seizure became generalized without loss of consciousness. On December 6 she again developed severe pain in the left ear with a mild amount in the right. The right drum appeared normal, the left was gray and abnormal in appearance. After irrigation overnight the left drum opened spontaneously. During the rest of the month the child did not eat well, vomited frequently, and had occasional "tremors" in the left side of the face and the left arm. After October 9 she complained of occasional "flashes" of pain in the forehead, and after December 15 this gradually became more severe, finally being more pronounced on the right side.

On January 1, 1938, she was found to be in a state of acidosis. Following treatment she im-

† Died February 1, 1940.  
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## Discussion

Dr Walter L Mattick, *Buffalo, New York*—Dr Dowdy has given us an excellent presentation of an interesting yet controversial subject. It is well known that the heavily filtered rays are less irritating and less absorbable, also that, with the small fields used, the tissue scatter will be one-tenth or less than that obtained from large fields, hence dosage three to four times the size used for larger fields will be perfectly safe. This explains the seemingly high doses mentioned in this paper. The careful protection of surrounding tissues and the meticulous aftercare as practiced by the author render such dosage doubly safe.

While admitting this thesis in theory, many like ourselves at the Institute find it impractical, due to the fact that few patients can be persuaded to spend twenty-five to thirty days treating what to them may seem like an insignificant skin lesion despite our protestations to the contrary. As a consequence, on the basis of

past experience with many methods and expediency in handling a great number of patients, we have developed a plan of treatment similar to that used in many other tumor clinics. With the use of several available modalities of radiation we suggest

1 For accessible surface lesions of the type under discussion, massive doses of unfiltered 140 kv p x-ray (1,500 to 2,500 r), radon bomb, 0.1 mm copper for 15 to 16 mc hr, or radium plaques for equivalent dosage. For eye lesions we protect the eye with a gold cup placed under the lids after cocaineization.

2 For inaccessible intercavitary involvement, i.e., anterior nares, external ear canal, etc., we recommend fractionated, protracted 200 kv p x-ray at 0.16 A to 0.11 A eff or gamma ray therapy over eight to fourteen days, supplemented in selected cases by radon gold implants or heavily filtered radium tubes in or against the lesion.

3 For recurrent, refractory, painful sloughing lesions we find endothermic removal and coagulation often curative or at least palliative where the above has failed. The use of 10 per cent aqueous solution of urea or a 20 per cent urea ointment has been of great assistance in addition to the suggestions of Dr Dowdy in promoting healing and combating infection in these cases.

In closing I again express my deep appreciation for being privileged to discuss such an excellent paper and suggest that he continue his pursuits in this interesting field in quest of an ultimate decision as to the solution of management of these cases.

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The cerebral hernia gradually increased to tremendous size (Fig 1) in spite of vigorous measures employed to reduce the intracranial pressure. Cultures were taken from the surface of the hernia on January 22 (about two weeks after operation) and revealed again the presence of *Pneumococcus* type III. Cultures taken February 5 (about four weeks after operation) revealed again the presence of *Pneumococcus* type III in addition to *Staphylococcus aureus* hemolyticus. On February 23 no pneumococci could be isolated from a smear taken from the hernia, a few staphylococci were found. The hernia gradually became smaller, the wound healed and the patient was discharged from the hospital on May 5 1938.

The arm remains spastic with forced grasping and poor extensor function of the fingers. Movements at the shoulder and elbow joint have improved, but wrist and hand motion remains minimal, voluntary grasping being much better than extension. Practically complete anesthesia of the hand is present, the sensation of the arm being almost normal. The leg remains somewhat spastic but the clonus has disappeared. The patient walks several blocks daily without assistance and the gait is steadily improving.

### Specific Therapy

In order to avoid possible spreading of the pneumococcal infection to the meninges, a combined treatment of *Pneumococcus* type III rabbit serum and sulfanilamide was initiated. Serum was obtained through the courtesy of Dr Augustus B Wadsworth, director of laboratories of the New York State Department of Health, Albany, New York. It is amazing to note that *Pneumococcus* type III was present on the surface of the brain even four weeks after the operation was done without apparently causing meningitis. Though it is known that *Pneumococcus* type III antiserum, even rabbit serum, is not very successful in the treatment of disease, it is certainly possible that the lack of spreading may be attributed to the combined specific treatment with antiserum and sulfanilamide.

### Comment

To us, this case appears unique in several particulars. Solitary abscess of



FIG 1 View of cerebral hernia eighteen days after operation

the parietal lobe following otitis media is rare, Courville and Neilsen having found only 26 cases reported in the literature in 1936. Most otogenous abscesses occur in the temporal lobe, often extending into the frontal lobe and rarely extending upward into the parietal lobe.

### *Symptomatology of Parietal Abscesses*—

In summarizing the cases of otogenous parietal abscess found in the literature Courville and Neilsen state "No doubt many such lesions have been considered as abscesses of unknown origin. The occurrence of jacksonian seizures followed by hemiplegia, sensory disturbance, sensory aphasia (if the major hemisphere is affected), progressively increasing intracranial pressure, and pleocytosis in the presence of otitis media, particularly in a young individual, should lead one to suspect the presence of a parietal abscess."

In the case presented here the syndrome postulated by Courville and Neilsen was present. The abscess was contralateral to the frank otitis media, but probably a subclinical form of otitis was present in the ipsilateral ear. The minor (right) hemisphere was affected in this case, hence no speech disorders developed. The sensory changes consisted only of loss of two-point discrimination. Mild pleocytosis (12 cells in the spinal fluid) was present, but the abscess was well encap-

proved, but on January 4, 1938, she vomited and suffered severe right frontal headache. No neurologic abnormality was noted. A blood count revealed 3,700,000 rbc with 65 per cent hemoglobin and 14,000 leukocytes, of which 69 per cent were polymorphonuclear and 28 per cent were lymphocytes. On January 6 the headache became so severe that codeine was required for relief and neurologic signs appeared. She was examined by Dr E A Sharp, who found her to have left hemiparesis that was most marked in the arm, next in the lower face, and least in the leg. There was ataxia of the left arm and leg. The tendon reflexes were exaggerated on the left, the left abdominal reflex was absent, and ankle clonus and Babinski's sign were present on the left. On January 7 the left hemiparesis was practically complete and she was admitted to the hospital.

The child was surprisingly alert and precocious in her answers. The right frontal eminence was tender to pressure without tympany to percussion. The neck was flaccid. The eye movements were normal without nystagmus. The pupils were round and equal and reacted normally. Ophthalmoscopic examination revealed the right disk to be elevated, its edges blurred and the veins engorged. A flame-shaped hemorrhage was present just off the lower temporal quadrant. The left disk showed no elevation, the edges were blurred and the veins moderately engorged. On voluntary stimulation paresis of the lower portion of the left side of the face was evident, the other cranial nerves responded normally to testing. The left arm was paretic, especially in gripping, with ataxia of the other joint movements. Tests of sensation in the arm revealed complete loss of two-point discrimination with preservation of pain and touch perception. No evidence of astereognosis could be elicited. The left abdominal reflexes were absent while those on the right were preserved. The deep reflexes were moderately diminished on the left side, and clonus was persistent in the left ankle and transient in the right. Babinski's sign was present bilaterally, being more pronounced on the left than on the right. The pulse rate was 120 per minute.

Clear colorless fluid was obtained by lumbar puncture under pressure fluctuating between 450 and 550 mm of water. The slow removal of 8 cc of fluid reduced the pressure to 300 (Ayala quotient 4.8). The fluid contained 12 cells per cubic millimeter, 2 plus globulin (Pandy), and 1 plus albumin reaction. Copper reduction was prompt.

The diagnosis was made of a left frontoparietal space-filling lesion probably a cerebral abscess.

On the evening of January 7, 100 cc of 50 per cent sucrose solution was given intravenously, and ventriculography was done during which there occurred a generalized convulsive seizure with extensor rigidity. The resulting roentgenograms showed both lateral ventricles to be displaced into the left side of the skull, the body of the right lateral ventricle being depressed markedly and the third ventricle being tilted sharply to the left.

*Operation*—A right parietal osteoplastic flap was turned down by Dr Wilder Penfield and Dr Hamby, anesthesia being obtained by tribromethanol in amylene hydrate. The dura protruded was not extremely tense, and was attached to the cortex in the region of the lower end of the postcentral gyrus above the sylvian fissure. The convolutions were widened and flattened and in several places white perivascular exudate streaked the cortical veins. At the site of dural attachment the ovoid surface of a lesion was exposed, its surface area being about 20 by 25 mm. This was removed en masse, but a small loculation opened, liberating creamy white pus. The abscess wall was removed completely, leaving a crater approximately 5 cm in diameter. The crater was packed with iodoform gauze, the bone flap was sacrificed and the scalp was closed with adequate drainage. Bacteriologic examination of the contents of the abscess revealed the presence of numerous encapsulated gram-positive cocci in diplo-form and in short chains. When inoculated into broth, sufficient growth was obtained after six hours and revealed *Pneumococcus* type III. Spinal fluids taken on several occasions proved to be sterile.

*Progress*—The profusely draining wound was dressed daily and the gauze packing was gradually removed. On January 9 3.0 Gm of sulfanilamide in divided doses was given the patient by mouth. On the following day, 1.8 Gm was given and this was continued daily for seven days after which the dose was gradually reduced until it was discontinued on February 2, 1938. A total of 23.4 Gm was administered by mouth.

On January 11, 1938, *Pneumococcus* type III rabbit serum was obtained. Ten cc. of this in 40 cc of saline was given intravenously twice daily for five days a total of 100 cc. being employed. No untoward reactions occurred.

On January 18 the tension of the flap was increased and the spinal fluid pressure measured 210 mm of water, a cerebral hernia appeared at the site of the anterior scalp incision. The paresis of the face began to clear up but the arm and leg remained paretic and anesthetic.

The cerebral hernia gradually increased to tremendous size (Fig 1) in spite of vigorous measures employed to reduce the intracranial pressure. Cultures were taken from the surface of the hernia on January 22 (about two weeks after operation) and revealed again the presence of *Pneumococcus* type III. Cultures taken February 5 (about four weeks after operation) revealed again the presence of *Pneumococcus* type III in addition to *Staphylococcus aureus* hemolyticus. On February 23 no pneumococci could be isolated from a smear taken from the hernia, a few staphylococci were found. The hernia gradually became smaller, the wound healed, and the patient was discharged from the hospital on May 5 1938.

The arm remains spastic with forced grasping and poor extensor function of the fingers. Movements at the shoulder and elbow joint have improved, but wrist and hand motion remains minimal, voluntary grasping being much better than extension. Practically complete anesthesia of the hand is present, the sensation of the arm being almost normal. The leg remains somewhat spastic but the clonus has disappeared. The patient walks several blocks daily without assistance and the gait is steadily improving.

### Specific Therapy

In order to avoid possible spreading of the pneumococcal infection to the meninges, a combined treatment of *Pneumococcus* type III rabbit serum and sulfanilamide was initiated. Serum was obtained through the courtesy of Dr Augustus B Wadsworth, director of laboratories of the New York State Department of Health, Albany, New York. It is amazing to note that *Pneumococcus* type III was present on the surface of the brain even four weeks after the operation was done without apparently causing meningitis. Though it is known that *Pneumococcus* type III antiserum, even rabbit serum, is not very successful in the treatment of disease, it is certainly possible that the lack of spreading may be attributed to the combined specific treatment with antiserum and sulfanilamide.

### Comment

To us, this case appears unique in several particulars. Solitary abscess of



FIG 1 View of cerebral hernia eighteen days after operation

the parietal lobe following otitis media is rare, Courville and Neilsen having found only 26 cases reported in the literature in 1936. Most otogenous abscesses occur in the temporal lobe, often extending into the frontal lobe and rarely extending upward into the parietal lobe.

### *Symptomatology of Parietal Abscesses* —

In summarizing the cases of otogenous parietal abscess found in the literature Courville and Neilsen state: "No doubt many such lesions have been considered as abscesses of unknown origin. The occurrence of jacksonian seizures followed by hemiplegia, sensory disturbance, sensory aphasia (if the major hemisphere is affected), progressively increasing intracranial pressure, and pleocytosis in the presence of otitis media, particularly in a young individual, should lead one to suspect the presence of a parietal abscess."

In the case presented here the syndrome postulated by Courville and Neilsen was present. The abscess was contralateral to the frank otitis media, but probably a subclinical form of otitis was present in the ipsilateral ear. The minor (right) hemisphere was affected in this case, hence no speech disorders developed. The sensory changes consisted only of loss of two-point discrimination. Mild pleocytosis (12 cells in the spinal fluid) was present, but the abscess was well encap-



sulated and was approximately of eight weeks' duration

*Route of Infection*—Courville and Neilsen analyzed the routes of infection that could give rise to parietal lobe abscesses. They found that such a lesion might be one of two or more abscesses in either or both cerebral hemispheres, suggesting a route of infection via the vascular system. The occurrence of associated thromboses of the lateral sinus and of the connecting veins indicated to them that the infection goes by way of the venous system rather than the arterial. In one of their cases the origin of the infection was a subclinical form of otitis of the same side, recognized only by culture at the postmortem examination. The family of the patient insisted that she never had complained of suggestive symptoms.

In our case the patient had suffered frank otitis of the opposite ear but had complained of pain occasionally in the ear on the side of the abscess. Because no evidence of metastatic infection appeared, one is led to the conclusion that the ipsilateral ear infection was the point of origin of this abscess, since an extremely circuitous route must be postulated for an infection to extend to the parietal area from the contralateral ear. The probable course of infection in this case then was from the right ear along the communicating veins to the cortex. The fact that the dura was adherent to the cortex at the surface of the abscess and that the neighboring cortical veins showed exudate along their walls lends support to this view.

### Summary

Solitary parietal otogenous abscesses are rarely encountered clinically or at postmortem examination, although they probably are more frequent than is realized.

A case is reported of a right parietal abscess, probably originating from subclinical otitis media of the right ear, the route of infection being via the communicating veins to the parietal cortex. The abscess was excised. The abscess was

caused by *Pneumococcus* type III. The presence of the organism was demonstrated on the cerebral hernia two weeks following operation and again in four weeks.

Sulfanilamide, as well as *Pneumococcus* type III rabbit serum, was administered. Although the therapeutic action of the type III antiserum is of questionable value, the possibility exists that, in this case, the spread of infection toward the meninges was prevented by the combination of specific antiserum and sulfanilamide. The symptomatology in the case agreed with the syndrome outlined by Courville and Neilsen.

### Discussion

Dr W P Van Wagenen, *Rochester, New York*—I think that Dr Hamby deserves a great deal of credit for obtaining as nice a result as has been demonstrated here. I do not know of anything that takes the patience and skill and tries the endurance of a surgeon any more than a large fungus cerebri associated with a brain abscess.

I am not certain whether or not the actual mode of spread of infection from the middle ear to the parietal lobe is the same as has been outlined. It hardly seems from this case that the point has been proved. However, it is immaterial. I would be more inclined to think that this particular abscess arose by way of blood-stream infection, than otherwise.

The important point in this presentation seems to me to be the good result obtained with the use of sulfanilamide. From all the information that I can obtain, abscesses in general—whether in liver, spleen, kidney, or brain—are less walled off following the use of sulfanilamide than otherwise. If this is true, it will materially change some of our modes of treating abscesses, particularly in the parietal region. The chances are that more and more abscesses will be treated, in this region, by tapping or by drainage with a small split in the dura and a small rubber tube in the abscess cavity. There is nothing more disastrous to function than to open the dura widely over a zone of cerebritis in which there may be an abscess of varying size.

The use of sulfanilamide will undoubtedly help a great deal in the prevention of meningitis and in the resolution of infection. There will always be a certain number of them, however, that will require surgical drainage of necrotic, broken-down material.

# ALLERGIC TREATMENT OF CHRONIC SINUS CONDITIONS

## Report of 50 Cases

MAURICE VAISBERG, New York City

IN RECENT years the role of an allergic state as the underlying fundamental etiology of many sinus and nasal conditions has been brought more and more to the attention of both the medical profession and laity. Following the exhaustive and basic work of Hansel and others, otolaryngologists and allergists have carried on a diversified clinical and laboratory investigation in ascertaining the role of allergy in these conditions. The words "conditions" and "affections" are used advisedly, because we are probably dealing with a basic state rather than "infection," "catarrh," "rhinitis," or "sinusitis," which are but secondary manifestations of the basic allergic state.

Herewith are presented the results (covering a period of three years) in a series of 50 cases of such chronic conditions in which the allergic treatment was both successful and unsuccessful. Every effort was made in the unsuccessful cases to ascertain the reasons for failure. Most of the cases have been evaluated properly in accordance with concepts developed during the course of the investigation.

A complete medical history was taken of each patient. Following this the eyes (pupils, movements, muscle imbalance, fundi), ears, nose (nasopharyngoscopy and anterior rhinoscopy), mouth, throat, and larynx were examined. In certain cases a further complete medical examination was performed by an internist. A neurologic examination was given where indicated. In this office the following laboratory procedures were performed in every case, viz. blood pressure, nasal smears, blood differential, blood Wassermann (and later also Laughlen's test), urine, and in most of the later cases the Oelgoetz test for serum amylase. If there were any other dischargings of infected areas (as ears), smears, cultures,

and indicated autogenous vaccines were made.

Each of the patients was then tested intracutaneously with as many allergens as were available in the office. Readings were made in twenty minutes and again in forty-five minutes and delayed reactions were read twenty-four hours later. From 0.01 cc. to 0.02 cc. was injected at each site. In the early cases the volar surface of the forearms was used, but later the back was used exclusively. As many tests as possible were done at one time—as high as ninety tests were done at the same sitting. In only a few instances was there any severe reaction.

At first an allergic history was taken, but later this was found unnecessary except in a rare case where the successful outcome was delayed. However, a brief allergic interrogation was usually made, especially with regard to inhalants and fumes. After the tests were made the patient was given a rigid basic diet consisting only of those foods to which actual test showed no skin sensitivity. That is, if a food had not actually been tested, it was not given. The basic or fundamental diet given consisted only of those foods that showed a negative reaction when tested. Any reaction greater than the control caused exclusion of that food from the diet. All allergens not tested were automatically excluded from the diet. Avoidance of positive inhalants, cosmetics, and alcohol was advised, and the proper allergic-proof encasings were prescribed where necessary.

In two weeks the patient reported back and then reported each two weeks for a month. If improved, three months were allowed to elapse on a gradually increasing diet in which one extra food was eaten daily (in addition to the basic diet) for two weeks. If no symptoms developed this particular food became part

of the basic diet. The foods first added were those that showed the least skin reaction, and as time went on foods showing greater and greater skin sensitivity were added. If symptoms developed during the two weeks in which a single added food was taken, then that food was considered a clinical reactor and was eliminated permanently from the diet. Under "Comments" this aspect is discussed further.

In addition to the major symptom or symptoms, each patient presented certain other minor symptoms which varied greatly among the various patients. Frequently, at the first visit these minor symptoms appeared to be totally unrelated to the main symptoms. It was only when the major manifestations were relieved by the strict allergic regimen that the relationship of allergy to the wide variety of minor and apparently unrelated symptoms became manifest by the disappearance of these minor complaints.

Many of these patients had had considerable previous treatment ranging (in the nasal cases) from the conventional sprays, drops, tampons, and irrigations to coagulations, adenotonsillectomy, and major operative surgery, and (in the nasal-asthma cases) from iodine drops, epinephrine injections, and desultory scratch testing to complete disappointment (usually with advice as to change of climate).

The study of these cases has led to the following statistical evaluations (Note: Since 50 cases are presented, the percentages are easy to arrive at. They are determined by multiplying the figure given by two.)

1. A tabulation of chief complaints and symptoms by cases

Symptoms	Males	Females
a Stuffed nose, postnasal drip, rhinorrhea, sneezing	24	17
b Headache	13	14
c Combined headaches and nasal symptoms (a and b)	10	12
d Frequent head colds	5	6

2. The youngest male was 1½ years and the oldest was 57. The youngest female was 7 years and the oldest 55.

Age	No of Males	No of Females
0-10	4	1
11-20	3	2
21-30	5	6
31-40	6	7
41-50	5	3
51-60	3	5
Total	26	24

3. Sixteen cases presented blood eosinophilia. An eosinophile count of 5 per cent and over was considered an eosinophilia.

4. Forty-three cases had eosinophiles in their nasal smears.

5. Twenty-eight cases gave a positive history of familial atopy.

6. Other minor symptoms that cleared under allergic regimen and so could be attributed to the allergic constitution were:

Symptoms	Cases
Lassitude	25
Gastrointestinal upsets	14
Cough	11
Irritability and nervousness	7
Asthma	7
Joint and muscle pains	6
Constipation	5
Anosmia	4
Hordeola	2
Tinnitus	2
Arrested development	2
Eczema	1
Hypertension	1
Anorexia	1

7. Previous operative procedures without relief were as follows: Nine adenotonsillectomies, 8 cases had had one or more nasal and sinus operations.

8. Eleven patients needed subsequent treatment: 5—ragweed and grass injections for seasonal hay fever, 3—dust and feather injections because of professional and business contact, 1—a deviating asthma patient required close observation, 1—required sulfanilamide to clear a persistent antrum infection, 1—required submucous resection and tonsillectomy. One of the above required nasal ionization without relief.

9. The following is a tabulation of cases listing the frequency of occurrence of visible pathologic changes in the nose.

	Number of Cases
a. Posterior tips of turbinates pale and moderately to hugely swollen	35
b. Purulent discharge	16
c. Hypertrophied nasal lining	5
d. Mulberry posterior tips of inferior turbinates	4
e. Polyps	1
f. Polypoid changes	1

(The anterior rhinoscopic appearances are omitted because generally there were no characteristic changes noted anteriorly. The mucosa here varied from the normal pink to moderate red or pale boggy appearance in different patients and at different times in the same patient. This applies to the mucosa before treatment. However, after treatment, in the relieved cases, the mucosa never exhibited any boggy and the nasal passages were completely clear.)

#### 10 Results were as follows

Complete relief	36	72%	} 82% helped con- siderably
Marked relief	5	10%	
Moderate relief	1	2%	
Failures	8	16%	

Five failures were all due to an absolute lack of cooperation on the part of the patient. Three failures were due to the financial and other inabilities of the patients to help themselves in carrying out the regimen.

11 There follows a tabulation of cases obtaining relief through predominance of the listed modes of therapy (after observation for one to three years)

Food avoidance	26
Inhalant avoidance	5
Combined food and inhalant avoidance	10
Dust injections	3
Feather injections	2
Pollen injections	6

In this study nasopharyngoscopic examination was carried out on practically every case. The most striking finding was a swelling of posterior tips of the inferior and middle turbinates. This varied from a pale moderate to a huge pale smooth swelling occluding the choanae. In a few cases polyp-like masses hung down from the posterior tips of the inferior turbinates. These shrunk somewhat on the application of ephedrine.

These swellings were always pale in contrast to the red swellings seen in

acute and subacute infections. In acute infections there was an angry red look and tenacious mucus was present. In subsiding acute or subacute instances, the markings of the capillaries could be seen through a light red mucosa. These acute and subacute observations were made in cases other than those presented in this series.

In the more chronic cases, areas of permanent hyperplasia resembling small knobs were present on the posterior tips and occasionally in the area of the lateral nasal wall exactly between the posterior tips.

The edematous swellings responded in varying degrees to 2 per cent solution of ephedrine or 1:1000 epinephrine. After sufficient application, most of the posterior tip swellings (except permanent hyperplasias) subsided.

#### Comments

In the entire series only 1 patient had syphilis.

A very remarkable finding was that if the patients adhered rigidly to the diet, they experienced definite relief in about two weeks. Then, after another two weeks of increasing help, some of them (especially the patients suffering with asthma) would start deviating, and there would be a return of the symptoms. This peculiar psychologic quirk was quickly recognized and potential strayers were appropriately warned at the right time.

In some of the patients the allergic balance was favorably "set" after a period of adherence of about six months. By this is meant that foods that had caused symptoms previously could, at this time, be taken with impunity. This, however, did not apply to all of the patients. In most of the cases the diet was increased gradually (one food every two weeks) until a clinical reactor was found. The foods added first were those that showed the least skin reaction. Foods showing larger reactions were added later. Generally, it was found that a delayed reaction had more clinical significance than a nondelayed one of equal magnitude on the original "wheal" test-

ing In many cases it was found that there was no apparent relationship between a substance that reacted strongly to skin test and its clinical significance. For example, a marked skin reactor could be eaten without the appearance of any symptoms. On the other hand, some foods showing a minimal skin reaction were strong clinical incitants. This relationship was well brought out by the procedure of adding only one food (eaten daily) every two weeks. However, it was extremely rare for a substance that showed a completely negative reaction to be clinically responsible for symptoms. The inference is that a skin reaction, no matter how slight, *may* be of the utmost clinical significance. However, the statistics and observations involving the actual tests and their clinical significance will be the subject of another paper. In one single patient the allergic balance appeared to have been favorably "set" by an appendectomy.

After a patient had built up a large basic diet and then deviated by eating one or more of the definitely offending foods, symptoms would invariably occur within a very short period ranging from twenty minutes to two days. The mere discontinuance of such an offender or offenders (that is, the resumption of the previous basic diet) would insure a cessation of the symptoms within a period of a day.

Several of the patients developed an intensification of symptoms within a few hours after skin testing. It must be remembered that all of the antigens were tested at one sitting and so such a reaction was considered of good diagnostic and prognostic value. It meant that the patient was most likely allergic and that the foods and inhalants tested were probably causing his symptoms.

Individual cases showed unusual findings.

1 This patient showed definitely that his large aural polyp was on a concomitant allergic basis.

2 In this case, there remained a resistant streptococcic infection of one antrum which required the use of sulfa-

nilamide to eradicate. Perhaps here there was bony involvement.

3 This patient started with a blood pressure of 200/105 and dropped to 175/90.

4 Though this patient obtained a measure of relief he did not obtain complete cure. We must consider that the changes in his nasal and sinus linings had gone on for forty years. Hence, one can expect a lesser degree of relief in cases of extremely long standing.

In a great many cases on testing the urine with Benedict's solution, a whitish flocculation occurred on boiling. This appeared as a semigelatinous mass in the clear blue reagent. This was never observed on testing the urines of several hundred nonallergic patients. In this entire series the urine was negative for sugar and albumin.

In only 1 of the cases presented was there any hypertension. The general tendency seems to be toward hypotension.

The findings and observations presented here are generally in agreement with those of various other workers.

1 Mullin<sup>1</sup> found allergy to be involved in 34 per cent of cases of chronic sinus disease. In this series the incidence was 100 per cent.

2 Jay<sup>2</sup> and Coie and Jimenez<sup>3</sup> believe that the mucosa need not be pale and boggy to denote allergy. In the present study this observation was found to be true anteriorly, but the nasopharyngoscope practically always showed pallor and bogginess posteriorly, especially the posterior tips of the turbinates.

3 Clarke<sup>4</sup> emphasized the need for repeated nasal smears to demonstrate eosinophiles. This was confirmed repeatedly in this series.

4 De Stio<sup>5</sup> expressed very aptly the concept advanced in this presentation that "chronic hyperplastic sinusitis is fundamentally due to a diminished resistance to bacterial infection as a result of the presence of an allergic reaction in the mucosa of the patient."

5 Slack<sup>6</sup> advises thorough study before sinus operation. However, in any

event, it is better to do allergic tests first, even if one is not absolutely sure of its presence, than to subject the patient to an operation

6 The conclusions reached here agree with McLaurin<sup>7</sup> that "irrespective of the type of surgery employed one cannot expect permanent benefit unless the essential allergic tendency is studied and treated"

7 The work of Hansel<sup>8</sup> is given ample confirmation in this study by the occurrence of other allergic manifestations in the nasal allergic. As the study progressed the truth of his statement that "the diagnosis of nasal allergy is good presumptive evidence that these other manifestations are of an allergic nature" became more evident

8 Accord is shown with Clarke and Rogers<sup>9</sup> concerning the superiority of the intradermal test over the scratch test. Their suspicion of painless abscesses of the teeth was confirmed in 2 cases (not in this series) of dermatitis, resembling urticaria. In both of these the usual testing was of no avail. It was only after the removal of an apparently externally innocent tooth that the condition cleared in each case. A contrast of results of nasal cases may be of interest

	Clarke and Rogers	This Series
Complete relief	23%	72%
Marked relief	56%	10%
Cases helped	79%	82%

Perhaps the difference in the "complete relief" figures can be due to the fact that this study was made in a small-town practice (Patchogue, New York) where control and daily contact with the cases are much easier

Semenov,<sup>10</sup> in a most interesting and fundamental study of the histopathology of chronic sinusitis, concludes that (1) Manifest allergic sinusitis occurs in 17 per cent; (2) the allergic membrane is prone to infection and resistant to treatment, (3) hyperplastic sinusitis, especially the bilateral type, is allergic in 70 per cent of the cases. His findings thus serve to corroborate the clinical findings

and results in this series of cases and also help to confirm the concept advanced here, viz, that most cases of chronic sinus affections are basically allergic in nature with or without superimposed infection

The associated allergic symptoms are of interest. These include in order of frequency lassitude, gastrointestinal upsets, cough, asthma, irritability and nervousness, joint and muscle pains, constipation, anosmia, tinnitus, hordeola, arrested development, anorexia, eczema, and hypertension. There is good reason to believe that these may exist by themselves, each as the major symptom, without the presence of a manifest allergy. Such patients may be treated for a long time without any help until the allergic etiology is brought to the fore and proper treatment instituted. Most gratifying in the patients studied here was the disappearance of these associated allergic symptoms with the relief of the major nasal complaint.

## Conclusions

In every case of chronic nasal and sinus affection there is need for a thorough and systematic local and (indicated) general study. Cases that have received no previous therapy (and there are very few of those) might be given the benefit of any of the standard medical procedures such as shrinkage. In this connection, nasal ephedrine in the Proetz position is the most effective and the least harmful. The ephedrine may be used as drops at home or as displacements in the office. Usually one will find either temporary palliation or no relief.

The important procedure in all of these cases is the detection of an underlying allergy, its investigation, and its rigid therapy. Even if no evidence of allergy is present, it is far better to treat the patient allergically than to perform any nasal operative procedure, no matter how minor. The maxim should be, "In chronic nasal and sinus affections think of allergy first and operation last."

A further word of caution is necessary. It is not advisable to subject any patient

to the allergic tests and rigid regimen unless the suffering of the patient more than compensates for the apparent annoyance and sacrifice of following a strict allergic routine. For example, a slight nasal stuffiness and/or a slight postnasal drip is usually much less trouble to a patient than the indicated regimen, no matter how enthusiastic a patient may be *before* taking the tests. Hence, it behooves the physician to make a judicious selection of the "sufficient" or "adequate" sufferers on whom to apply the procedure. An attempt to apply it to all cases no matter how trivial will serve to bring the method rapidly into disrepute.

From the results of these cases it appears reasonable to follow this routine:

1. One should obtain complete allergic control. This will usually be most gratifying and sufficient.

2. If insufficient, one should establish immunologic control if necessary. This involves either directed chemo-

therapy (for hemolytic streptococcus) or autogenous toxoid-filtrate. This, combined with most judicious (and very minor) operative procedures will probably clear up 99 per cent of the cases.

3. A major nasal and sinus surgical procedure, including submucous resection, should be tried only as a last resort. When and if this is done, the patient will then be under the best possible allergic and immunologic control.

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## MEDICAL SAGA OF THE AIR

For a brief period a new headline vied with the war news for the front page of Australian newspapers, reports a letter from Australia to the *J A M.A.* A "flying doctor" and his pilot were reported missing somewhere in central Australia.

Three days after they had set out from Cloncurry the plane was located, and the doctor and his pilot have now been rescued by a land party. That a flying doctor's plane has been forced down somewhere in uninhabited countryside is nothing new to these men whose "practices" are lonely Spinifex desert and rocky ranges. In eleven years of service, Australia has come to take the saga of the flying doctors somewhat for granted.

Today more than 1,000,000 square miles and more than 3,000 people are served by the six medical men whose wings carry them on a four-hundred-mile radius from Port Hedland, Cloncurry, Broken Hill, Kalgoorlie, Wyndham, and Alice Springs. Last year, and the Alice Springs station was then barely established, the flying doctors flew nearly 100,000 miles. From the six hundred pedal wireless stations scattered through lonely Australian outposts and the receiving sets at the bases came 37,654 calls for help for medical advice. Dr. Alberry, flying doctor of the Cloncurry base, who was reported missing last week, has himself circled the earth six times

in mileage on his flights to aid outback people. To land where there is no landing ground, to risk his life to reach a patient, to go where no white man has gone before, is nothing new to the doctors of the flying medical service.

That is the flying doctor's job. So are all the other hazards that come his way.

There have been times when the wing of a plane has formed the roof of their surgery, when forced down in unknown territory, one or other had to use all his skill to save his own life and the life of his pilot until help came. It has taken eleven years to complete the structure that an Australian inland mission padre dreamt of in Cloncurry in 1928, and "Flynn of the Island," now moderator general of the Presbyterian church in Australia, has lived to see his dream come true.

The cost of maintenance of the six bases alone is more than £25,000 a year. Of this the Commonwealth and stage governments contribute £9,000. The rest comes from trusts and private donations. Last year the flying doctor service became the Australian Aerial Medical Service. Thanks to the flying doctor and his plane, much of the loneliness, much of the terror has gone from Australia's outback today. They are covering the open spaces of the land with a mantle of medical safety.

# TERATOMA OF TESTIS WITH NEGATIVE ASCHHEIM-ZONDEK TEST

## Report of a Case

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NEOPLASMS of the testis, while uncommon, are important because the majority are capable of rapidly destroying an otherwise healthy individual in the prime of life. Insidious in onset, they may grow to luxuriant proportions and, with astounding speed, form huge metastases in neighboring glands or distant organs. In some cases, neither extensive surgery nor intensive radiotherapy is of avail. Tumors of the testis are interesting further because they present a kaleidoscopic pathologic picture. The majority, supposedly arising from aberrant totipotent germ cells, tend to form one or more embryonal layers, any one of which may overgrow and compress the atrophic remains of the testis. They are the highly explosive embryonal teratomas or carcinomas, and can spread via the lymphatics or blood stream. Slight differentiation rarely occurs, resulting in the relatively static yet potentially dangerous adult teratomas.

The seminomas of Chevasu constitute another group of tumors, and are of equal incidence and almost equal virulence as the embryonal teratomas. They have, however, a constant gross and microscopic picture that differs from the latter. Chevasu was of the opinion that the seminomas arose from adult seminal cells. Sections from these tumors show a uniform array of large polygonal cells, with large nuclei and definite nucleoli. Recently, the noncommittal term "large-celled carcinoma" has been proposed in place of "seminoma."

The problem of neoplasm of the testis is one of early diagnosis, as only then can surgery and radiotherapy offer any hope of cure. Education of the layman to the

realization that a growing, painless, intrascrotal lump may be more serious than a painful one, will hasten his seeking relief before it is too late. Any pre-operative test that can aid in the differential diagnosis is a further step, for it is well known that early tumors of the testis may clinically resemble tuberculous, nonspecific, gonorrheal epididymo-orchitis, gumma of testis, and hydrocele. [It was this which the application of the Aschheim-Zondek test gave promise of accomplishment.]

Aschheim and Zondek, having found that the urine from a pregnant female contained a substance capable of stimulating the growth of the gonads of immature virgin female mice, recognized the similarity of this action to the hormonal effects emanating from the pituitary gland. Thus they noted that the young follicles swelled (reaction 1), some became hemorrhagic, producing "blood points" (reaction 2), and occasionally, luteinization occurred (reaction 3). They termed the follicle-ripening principle prolan A and the luteinizing one, prolan B. It is now generally accepted that the origin of these principles lies in the trophoblastic cells (Novak<sup>27</sup>).

Extending their observations, Aschheim and Zondek demonstrated that other rapidly growing masses containing embryonal tissue, such as chorionepitheliomas and teratomas of the testis and ovary, gave a similar reaction. They pointed out that urine of healthy individuals and of those with nonmalignant diseases of the testis (gonorrhea, tuberculosis, syphilis, hydrocele) gave no response. Here, therefore, was the first biologic test for cancer of a specific type



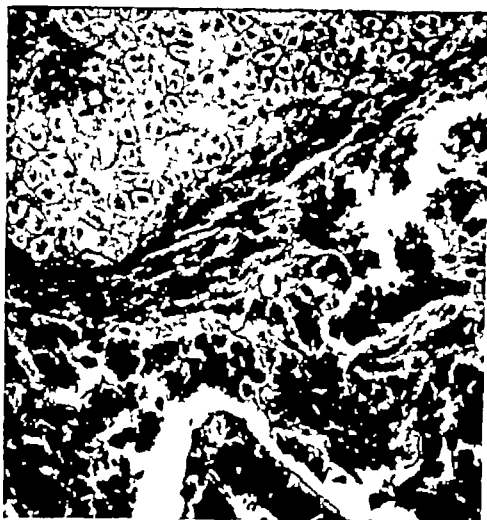


FIG 1 High-power magnification showing highly active carcinomatous tissue surrounding a relatively benign area of cartilage

and, as such, was of profound importance. Subsequent studies further revealed that, in cases of carcinoma of the testis, the degree of malignancy tended to go hand in hand with the amount of gonadotropic substance present in the urine. A positive test, obtained with either a very small amount of urine or with diluted urine, usually accompanied a highly active malignancy. On the other hand, with slow-growing malignancies, there was, as a rule, a small amount of the active principle in the urine, and the test tended to be negative. In order to obtain a more potent content, it became necessary to concentrate the urine, and thus the quantitative method developed.

High concentrations, however, yielded positive reactions not only in the embryonal testicular tumors but also in seminomas and, at times, even in hydrocele or tuberculosis of the testis. Some confusion, therefore, arose regarding the specificity of this test in lesions of the testis. Zondek reported a positive reaction in a patient with tuberculosis of the testis and epididymis, and quoted Bruhl as having found a positive reaction three times in 6 cases of tuberculous epididymitis or epididymo-orchitis. Ferguson, in concentrating the urine, obtained

both a follicular and lutein reaction in mouse ovaries in cases of seminoma. Owen and Cutler found the gonadotropic substance in the urine of 13 men, some of whom were normal and some who had benign tumors of the testis. The amounts (50 mouse units per liter) were small when compared with the huge concentration that patients with embryonal carcinomas of the testis yielded (the average being below 2,000 mouse units per liter and the highest being 50,000 mouse units per liter).

Hinman reported a patient with metastases from a chorionepithelioma, who had more than 1,000,000 mouse units per liter in the urine. In such instances, even a diluted urine ought to show a positive reaction. On the other hand, cases have been described where the clinical observations and subsequent events pointed to a highly malignant testicular neoplasm, yet a negative test was obtained. Hinman reported such a patient in whom an embryonal carcinoma of the testis was found, yet the urine failed to show any hormone on five separate tests. He did not state whether the urine had been concentrated but the report indicates that there may be instances with a negative yield where a positive one is expected.

Upon concentration of the urine, a positive reaction may be obtained in conditions other than a neoplasm of the testis. Castration, either by surgery or x-ray, may cause a false positive response<sup>5</sup> (Zondek), prolactin A may be present, but prolactin B is absent. The compensatory pituitary hyperfunction accompanying the induced deficiency may lead to the excretion of sufficient gonadotropic substance to yield a positive reaction. Other rapidly proliferating tumors, such as myoma, carcinoma, and genital hyperplasia, may give false positive pregnancy tests (Ehrhardt). Owen and Cutler<sup>5</sup> further state that cerebral tumors and acromegalia, elevated intracranial pressure, and hyperthyroidism may give positive tests.

In conclusion, therefore, it appears that, while the embryonal teratoid tes-

ticular tumors, rich in trophoblastic tissue, tend to give a strongly positive Aschheim-Zondek test (even when the urine is diluted and certainly when it is concentrated), there may occur, however rarely, malignant testicular tumors, with probably very little trophoblastic tissue, that may give a doubtful or even negative reaction unless the urine is concentrated and certainly if it is diluted. Furthermore, there are lesions in the testis other than neoplastic that, under certain conditions, may give a positive reaction, and still furthermore, there are extratesticular states that may rarely give a positive test.

The situation is further complicated by the following factors that, unless attended to, may give false observations in the performance of this test. The urine must be fresh and preferably that obtained in the morning, as it contains more of the hormone than even a twenty-four hour output sample. Decomposition of the urine, according to Owen and Cutler, does not seem to affect the hormone materially, but such urine may be toxic to laboratory animals. Ferguson, however, is of the opinion that many negative reactions result from fermentation of the urine which rapidly destroys the hormone.

To summarize, the noting of a positive reaction, when the Aschheim-Zondek test is performed in the routine manner, helps to confirm a clinical diagnosis of tumor of the testis, but a negative report, even with a concentrated specimen, must not, in the present state of our knowledge, influence our mode of action to the same degree. Many of the factors involved in the manifestation of the phenomenon are still obscure, and therefore, undue reliance on a test that is not generally standardized or thoroughly understood has its dangers.

### Case Report

*Case 1*—M S. aged 43, a painter, married, was admitted to the Squier Urological Clinic on September 5, 1935, with a history of swelling in the left side of the scrotum of long duration. It was first noted in infancy and for many years he wore a truss. About a year ago the swelling



FIG 2 Roentgenogram of the chest showing multiple and varying sized round and outlined shadows throughout both lung fields, typical of blood-borne pulmonary metastases

increased in size, and he was told at a hospital, following a negative Aschheim-Zondek test, that the left testis was inflamed. Local diathermy treatments and a suspensory gave no relief, the swelling steadily increasing in size.

When first seen, the general examination was negative except for an old appendectomy scar. In the left side of the scrotum there was a firm mass that extended well up in the inguinal canal, was not tender, and did not transilluminate. The prostate was congested and moderately tender. The urine was acid, the specific gravity was 1.032, there was a very faint trace of albumin and no glucose. The microscopic examination showed occasional red blood cells. The Aschheim-Zondek test was negative.

The patient was operated upon on September 9 and a left orchidectomy and herniotomy was performed by Dr. George W. Fish. The scrotal mass was quite firm and was found to impinge upon the dilated left internal inguinal ring. The tumor was extruded through the incision by pressure from below and the adherent peritoneum then was stripped from its upper border. The cord was freed, clamped, and cut and the testis was removed retrograde. The freed peritoneum or potential hernial sac was closed with a purse-string catgut suture, and muscle repair was done in the usual manner.

### Pathologic Report

*Gross*—Tumor of the testis, weighing 205 grams and measuring 5 by 4 by 3 cm.

On section, several types of tissue in various stages of degeneration were seen. The tumor

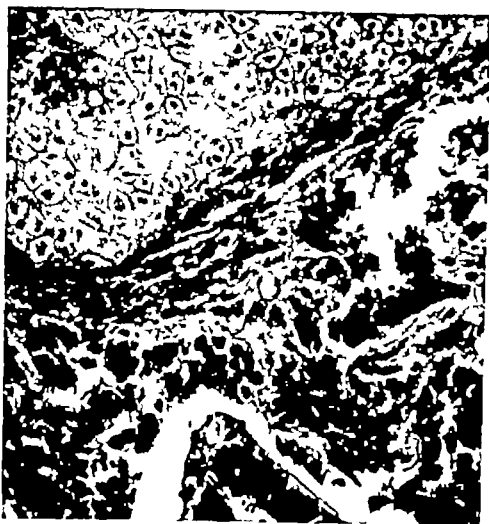


FIG 1 High-power magnification showing highly active carcinomatous tissue surrounding a relatively benign area of cartilage

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# PROBLEMS AND RESULTS RELATED TO THE CARE OF THE PREMATURE INFANT

JULIUS H. HESS, M D , Chicago

I WISH to express my thanks for the opportunity of talking to the members of the Medical Society of the State of New York on the subject of "The Premature Infant—Their Care and Future." All matters pertaining to the care of small infants have interested me greatly during the past quarter of a century. The results which we have experienced in the care of the premature infant have been the source of a great deal of satisfaction. I am sure that a review of the mortality and morbidity rates among the newborn in New York and Illinois cannot help but convince us that we are making considerable progress in lowering both morbidity and mortality rates among prematurely born infants but even more striking progress in the case of all newborn infants during the past five years.

In Chicago we have attempted to apply the institutional procedures of Sarah Morris Hospital to a city-wide program for the care of prematurely born infants. It is my belief that the routine practiced has not alone lowered the death rate among premature infants but it has also been a great factor in focusing attention on the natal and neonatal periods with resulting lowered mortality in Illinois and Chicago among all newborn infants (Table 1). The statistics for New York State and the City of Syracuse for the years 1935 to 1938 are noted in Tables 2 and 3.

While a very satisfactory improvement has been noted in the lowering of infant mortality in your state and my own, more especially in the last three years, there is still room for improvement. The results noted in the past few years are attributable to a closer understanding and cooperation between the practicing physicians and the public health officials.

In Illinois this is true to a remarkable degree. As stated, there has been a steady decline in the total deaths during the first year of life. On the whole, however, there has been little decrease in the death rate in the first month of life, which accounts for nearly half of the total loss of life in the first year. The situation pertaining to the first day and first week after birth have, until recently, shown only a minimum decrease in the mortality rate. More than one-half of the deaths of the first month are in the premature infants. We may therefore state that the field in which the least has been accomplished is in the saving of infant lives in the first days and months and in those cases with associated pathology during pregnancy and abnormal labor.

In both states our attention for the past several years has been focused on the decreased birth rate. Illinois in 1925 with its 19 plus birth rate per 1,000 population decreased to an average of approximately 14 during the six years preceding 1938. In 1938 it rose to 15.4 per 1,000 population, the highest since 1931.

This decreased birth rate is of great importance to our respective states but of special interest to obstetricians and pediatricians, and we might even convey to our clientele that we could use more business.

New York's lessened mortality rate from an average of 49.1 per 1,000 live births for the years 1933 to 1936, inclusive, to 45.1 for 1937 and 40.7 for 1938 certainly are most gratifying to the state and the medical profession.

While showing progress in the lowering of mortality even in the first month of life as seen in New York from 30.5 per 1,000 live births in the years 1933 to

*Read by invitation at the Annual Meeting of the Medical Society of the State of New York, Syracuse, April 27, 1939*

contained necrotic areas as well as some firm pearly tissue. A portion of the cord and epididymis and the wall of a large hydrocele of the tunica vaginalis were included.

**Microscopic** (Fig 1)—Malignancy of the testis, characterized by intertwining masses of irregular deep staining cells.

In places the syncytium resembled embryonal tissue lying in a stroma of mucin. Here the cells were very large and had enormous oval to triangular hyperchromatic nuclei. Mitoses were common. Some groups of cells were separated from one another by dense connective tissue septums. In other regions they were arranged in pseudogland fashion, disporting themselves irregularly in a loosely bound field of fibrous elements, areolar tissue, and lymphocytic and round cell infiltrations. In one section, in a field of necrosis and hemorrhage, there were a number of islands of cartilage. These were the relatively benign-looking elements in an otherwise frankly active carcinoma. In one of the islands a suggestion of calcification was noted. Sections through the epididymis showed it to be free of cancer, but the malignant cells were close to it.

**Diagnosis**—Carcinoma of testis with evidence of an embryonal tendency and teratomatous origin.

The patient made an uneventful postoperative recovery. Aschheim-Zondek tests, done on the seventh and fourteenth days postoperatively, were reported negative. He was referred to the clinic for follow-up and radiotherapy. On October 28, because of a cough, a roentgenogram of the chest (Fig 2) was taken that indicated that "the lungs were filled with multiple and varying sized round and discreetly outlined shadows throughout both lung fields. These were typical of those seen with the blood-borne type of pulmonary metastases."

The patient died on November 30, following a severe pulmonary hemorrhage.

## Comment

1 The history suggests that the patient had a congenital hernia and a partially descended testis. The latter may have been the seat of an adult type of teratoma for many years that more recently had undergone a change to the highly malignant embryonal type of carcinoma.

2 The repeatedly negative Aschheim Zondek tests in two hospitals are perplexing in view of the reputedly intense gonadotropic activity associated with this type of cancer.

3 The tendency for undescended testis to undergo neoplastic change should have served as a warning, and, in spite of the apparent absence of the gonadotropic principle in the urine, the patient should have had a further work-up.

4 The case emphasizes the danger through loss of time and injudicious treatment if a test that is neither generally standardized nor thoroughly understood determines one's therapeutic procedure.

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## MEET A NEW WRITER

"The December issue of *The Readers' Digest* contains an article by Heil Hunger entitled

'Health Under Hitler'. No comment is needed"—*Esteemed Middle Western Contemporary*

1940 As early as 1934 the station became overtaxed and provision was made for the opening of a station at Cook County Hospital to care for infants not only born in the hospital but of patients received from other sources. The Cook County Hospital station for premature infants admitted 253 infants in 1934, 286 in 1935, 255 in 1936, 343 in 1937, 426 in 1938, and 441 in 1939. At Cook County Hospital all patients are treated free of charge, and at Sarah Morris Hospital approximately 75 per cent receive free or very low-cost service. At Cook County Hospital between 85 and 90 per cent are born in that hospital, while of those treated in Sarah Morris Hospital only about 20 per cent are born in Michael Reese Hospital.

Infant death rates in many large cities have remained at much the same percentages with relation to the total births during the five years preceding 1935. In Chicago, the deaths per thousand live births (under 1 year of age) were 1930, 53.4, 1931, 56.4, 1932, 48.2, 1933, 48.8, 1934, 47.7, 1935, 40.1, 1936, 38.5, 1937, 37.8, and 1938, 33.7. A study of the reported causes of death led to the belief that efforts to reduce the death rates further must be directed toward conditions associated particularly with early infancy, such as maternal illness, birth injuries, and premature birth.

#### The Chicago City-Wide Plan for the Care of Premature Infants

With all these facts in mind and believing that deaths from prematurity might be lowered by well-organized effort, the Board of Health of Chicago initiated the Chicago-wide plan for the reduction of deaths associated with and due to prematurity.

A reduction in morbidity and mortality rates among prematurely born infants seemingly offered a promising field for lowering the death rate among newborn infants. It was felt that, if the same principles established in conducting the premature station at Sarah Morris Hospital could be applied in a Chicago-wide

program, many premature infants now lost might be saved.

The Sarah Morris Station offers (1) ambulance service by the hospital, (2) premature ward care, with special equipment for oxygen therapy and other types of emergency therapy, (3) nursing service by a trained personnel, (4) breast milk obtained from wet nurses and visiting mothers, (5) field nursing service for instruction of the mothers, special attention being given to the promotion of breast-milk secretion—breast milk in the home reduces the number of hospital days, (6) a supply of a simple type of heated bed, loaned for the use of graduates in the home—special value in reducing the number of returned cases due to acute illnesses after discharge, (7) an outpatient clinic maintained for instruction of mothers and the care and supervision of graduates not having private physicians.

This program was an attempt to apply institutional procedures already found successful in a hospital expanded to meet the demands of a large metropolitan community. The city-wide plan for Chicago was started in March, 1935.

#### State and Other City-Wide Programs

Twelve of the forty-eight states as well as the District of Columbia and the Territory of Hawaii have some plan contemplated or already in operation for improving the care of premature infants. The most complete plan is that now being carried on by Massachusetts.

During 1937 the Commonwealth of Massachusetts initiated its state-wide program on the care of premature infants, its objective being the reduction of the premature death rate and improvement of standards for the care of premature infants. They provide transportation through the local boards of health to nearby hospitals adequately equipped to care for infants weighing 5 pounds or less who cannot adequately be cared for in their homes. Hospital maintenance is provided free for indigents by the local boards of public welfare.

In Massachusetts about three-fourths

TABLE 1

	Birth Rate per 1 000 Population		Infant Mortality Under 1 Year			per 1 000 Live Births	
	Illinois	Chicago	State	Illinois		Illinois	
				Rural	Chicago	White	Negro
1922	19 8		76	68		75	127
1925	19 1		72 5	70 8		70	123
1930	20 5	17 2	50	59	53 4	54	90
1935	14 3	13 8	46	50	40 1	45	70
1936	14 20	13 4	46 7	52 2	38 5		
1937	14 6	13 8	43	46 7	37 8		
1938	15 4		41 2	45 7	33 7		

## Outstanding Facts

1 Rapid decline in birth rate in both states—1930 to date  
 2 Striking decline in mortality under 1 year—1930 to date

3 Early higher mortality in cities  
 4 Since 1930 higher mortality in rural areas  
 5 Chicago lowered rate since starting city wide plan in 1935

TABLE 2—NEW YORK STATE—BIRTHS STILLBIRTHS AND INFANT MORTALITY

	Rate		
	1938	1937	1933-1937
Births	14 0	13 8	14 0
Stillbirths	30 8	31 2	33 8
Infant mortality	40 7	45 1	49 1
Under 1 month	27 0	28 2	30 5
1 month-1 year	13 7	16 8	18 6

TABLE 3—CITY OF SYRACUSE 1938

Neonatal Mortality (Under One Month) Among Infants Born According to Month of Gestation			
Month of Gestation	Births	Deaths Under One Month	Rate per 1 000 Births
Total	3 884	103	26 5
Premature (5 38 per cent)	209	56	267 0
5 months	9	9	1 000 0
6 months	19	16	842 1
7 months	61	21	344 3
8 months	110	10	84 0
Full term	3 675	47	12 8

1936, inclusive, to 27 in 1938, these figures do not meet with our highest expectations, and all forces are now concentrating on the first month, week, and day of the neonatal period. Therein lies a great hope for further reduction in the mortality rate among newborn infants. We must concentrate on the prevention or delay of premature labor, whenever this can possibly be accomplished without danger to the mother, and on meeting the special needs of the premature infant after it is born.

In Table 3 presenting the 1938 mortality rate in Syracuse, we note that, of 3,884 births, 209 or 5 38 per cent were classed as premature infants and that the mortality in the first month of their lives was 103, or at the rate of 267 9 per one thousand, while among the full-term infants it was only 12 8 per one thousand or a total of 47 infants. Translating this

into the percentage of all deaths among infants in their first month, 54 3 per cent were due to prematurity.

Even more striking is the fact that only 10 of these deaths were infants born in their eighth month of gestation. In this group of prematures the mortality rate was 84 per 1,000 live births as against 344 in the 7-month infants and 842 1 in the 6-month group. None survived in the group with a shorter period of gestation. These figures correspond closely with our Sarah Morris Hospital age and weight groups as seen in Table 4.

Another gratifying result is the decreasing stillbirth rates in recent years in both states, and the rates are shown to be even more striking in Syracuse and Chicago.

STILLBIRTH RATES PER 1 000 BIRTHS

	1938	1937	1933-1936
New York State	30 8	31 2	33 8
Illinois	26 5	26 6	41 2
Syracuse	23 4	27 0	30 5
Chicago	25 9	27 2	28 5

The smaller number of infant deaths should therefore exclude the thought that there might be a tendency to classify as stillbirths infants born alive but dying shortly after birth.

The Premature Station at Sarah Morris Hospital, established in 1922, was the first of its kind in Chicago that was willing to receive premature infants born in other hospitals and in homes. The demand for such a station is evident, as shown by the gradual increase in the number of patients admitted—from 19 in the first year of operation to 392 in 1939 with a total of 3,540 up to January 1,

be included, evidence of life being heart beating or breathing "

Therefore, premature infants may be classified for practical clinical purposes to include any infant, whether a single or multiple birth, born prematurely, at term or even past term, whose weight at birth is below 2,500 grams ( $5\frac{1}{2}$  pounds). The inference is that the infant is not completely prepared for full, normal, independent extrauterine life. There may be, however, only a relative body weakness in the absence of inherited constitutional debility and malformations. Full consideration must be given in the case of each individual infant to the precipitating causes in the parents and the infant which might have led to premature delivery or pathologic intrauterine development.

It is well known that the younger and smaller the fetus when leaving the uterus the greater are the difficulties to be overcome in carrying out required body functions necessary to life and, therefore, the consequent lower vitality.

A second resolution passed at the same meeting of the American Academy of Pediatrics meeting expressed the desirability of registering mortality in the following manner:

"1 In weight groups, number of cases should be studied in five weight groups (1) Under 1,000 Gm., (2) 1,000-1,250 Gm., (3) 1,251-1,500 Gm., (4) 1,501-2,000 Gm., (5) 2,001-2,500 Gm.

"2 Age at time of death of various weight groups

"3 Age at time of admission of infants received from other hospitals and homes "

*Benefit to the Infant of a Prolonged Gestation*—Clifford has estimated the expected intrauterine weight gains per week to be: fifth lunar month, 120-150 Gm., seventh lunar month, 180-240 Gm., ninth lunar month, 300-360 Gm.

The value of continuing intrauterine life as long as possible is well evidenced by the mortality rate based on weights taken from the records at the Sarah Morris Station.

MORTALITY RATES BASED ON WEIGHT

Survival	Percentage
Less than 750 Gm	4 33
750-1 000 Gm	17 12
1 001-1 250 Gm	40 7
1 251-1 500 Gm	53 8
1 500-2 500 Gm	70 9
2 000-2 500 Gm	87 8

It can be easily realized, therefore, that two to four weeks of prolonged intrauterine life is of great importance in reducing the mortality. It is also to be remembered that the younger the fetus the graver the danger of intracranial hemorrhage.

*Obstetrical Analgesia*—Any analgesic given to the mother affects the baby to some degree. Irving in a study of 500 consecutive deliveries where no anesthesia was used, found only 10 per cent of the babies required resuscitation. In a series receiving scopolamine-morphine, he found 60 per cent had to be resuscitated, and in a group in which phenobarbital was administered, 40 per cent required resuscitation. These figures refer to a study of deliveries of full-term infants. One can easily realize the increasing danger from various analgesics given in excess to the mother in the case of the prematurely born infant.

Immediately after respiration has been initiated in the infant suffering with extreme narcosis, oxygen or oxygen-carbon dioxide therapy should be instituted.

*Provision for the Premature Delivery*—In case of expected premature labor immediate preparation should be made for the reception of the infant into a proper environment. The preparation should not be delayed until labor has begun, otherwise many premature infants will be lost. If the proper facilities cannot be furnished in the home, the mother should be persuaded to enter a hospital before confinement.

Avoidance of mechanical trauma incident to delivery, chilling of the infant, and exposure to infection are important factors in reducing mortality.

*Methods of Resuscitation*—The possibility of asphyxiation of the premature infant must be borne in mind throughout



of all births occur in hospitals. The hospital-center part of the program is state wide outside of Boston. Forty-eight centers have been established. The hospitals are selected with a view toward strategic location and the grade of service given.

The nursery supervisors of the hospitals that have been accepted as premature centers are given a two-week course at the Boston Lying-In Hospital. The Department of Public Health pays the tuition of the nurse and also her traveling and living expenses during this course. A consultant nurse from the Department of Public Health is available for consultation services to nursery supervisors in the hospital centers.

The New York State Department of Health is also inaugurating a state-wide program. Special centers have been in operation in Albany and Syracuse since the first part of 1938. Schenectady, Utica, Troy, and other cities have followed a similar program. In other areas portable heated beds have been made available for loan purposes for infants cared for in the home in rural districts. Transportation is provided for taking the infants to nearby hospitals.

Dr. Edward S. Godfrey, commissioner of the New York State Department of Health, in answer to my recent inquiry as to the present status of their state-wide program, writes as follows:

"The problem of prematurity is considered part of the general aim to focus attention, effort, and study toward the reduction of neonatal mortality and the loss by stillbirths.

"The philosophy of your New York State Department of Health is that prematurity is an effect or expression of the larger problem, rather than a cause in itself, and that cause must be sought in the mothers or perhaps more correctly in the parents. In other words, the program for the premature infant is *admittedly palliative*, in this broader sense.

"New York's attack at present is directed toward the *urban centers*, in which most of the premature births occur, or are received, in the hospitals.

"The premature may receive expert care in the hospital, but on discharge of the mother needs equally intelligent public health nursing supervision in the home. It may not be possible for the premature born in the home to be transferred to hospital because of economic status of family, distance, extreme weather conditions, etc. New York has planned, therefore, to afford, each year, opportunities for *special training to a limited number of nurses*, sending them in pairs, from the same locality to train centers.

"(1) *A registered graduate nurse from a representative hospital staff*, who is in a teaching position, or who will be allowed to teach what she has learned to other staff nurses on her return, the other, similarly qualified, from (2) *the local public health agency*. There is thus created an interlocking interest and coordination.

"Portable heated beds have been made available in rural communities in New York for loan purposes to local physicians, either to transport infant to hospital, or to lend to the family where the premature is cared for at home, they have also been placed in a few small hospitals of limited resources and facilities."

New Jersey, Iowa, Minnesota, Indiana, Tennessee, West Virginia, Colorado, Nebraska, Wyoming, South Dakota, and Hawaii either are or soon will be in a position to provide a simple type of heated bed and special booklets on the care of the premature infant as requested by attending physicians.

At the annual meeting of the American Academy of Pediatrics held in New York City on May 19, 1935, the following resolution was passed in an attempt to define prematurity:

"For statistical purposes and comparison of results of care, a uniform standard for diagnosis of prematurity is important."

"A premature infant is one who weighs 2,500 Gm or less at birth (not at admission) regardless of the period of gestation."

"All liveborn premature infants should

be included, evidence of life being heart beating or breathing "

Therefore, premature infants may be classified for practical clinical purposes to include any infant, whether a single or multiple birth, born prematurely, at term or even past term, whose weight at birth is below 2,500 grams ( $5\frac{1}{2}$  pounds). The inference is that the infant is not completely prepared for full, normal, independent extrauterine life. There may be, however, only a relative body weakness in the absence of inherited constitutional debility and malformations. Full consideration must be given in the case of each individual infant to the precipitating causes in the parents and the infant which might have led to premature delivery or pathologic intrauterine development.

It is well known that the younger and smaller the fetus when leaving the uterus the greater are the difficulties to be overcome in carrying out required body functions necessary to life and, therefore, the consequent lower vitality.

A second resolution passed at the same meeting of the American Academy of Pediatrics meeting expressed the desirability of registering mortality in the following manner:

"1 In weight groups, number of cases should be studied in five weight groups (1) Under 1,000 Gm, (2) 1,000-1,250 Gm, (3) 1,251-1,500 Gm, (4) 1,501-2,000 Gm, (5) 2,001-2,500 Gm.

"2 Age at time of death of various weight groups.

"3 Age at time of admission of infants received from other hospitals and homes."

*Benefit to the Infant of a Prolonged Gestation*—Chifford has estimated the expected intrauterine weight gains per week to be fifth lunar month, 120-150 Gm, seventh lunar month, 180-240 Gm, ninth lunar month, 300-360 Gm.

The value of continuing intrauterine life as long as possible is well evidenced by the mortality rate based on weights taken from the records at the Sarah Morris Station.

MORTALITY RATES BASED ON WEIGHT

Survival	Percentage
Less than 750 Gm	4 30
750-1 000 Gm	17 12
1 001-1 250 Gm	40 7
1 251-1 500 Gm	53 8
1 500-2 500 Gm	70 9
2 000-2 500 Gm	87 8

It can be easily realized, therefore, that two to four weeks of prolonged intrauterine life is of great importance in reducing the mortality. It is also to be remembered that the younger the fetus the graver the danger of intracranial hemorrhage.

*Obstetrical Analgesia*—Any analgesic given to the mother affects the baby to some degree. Irving in a study of 500 consecutive deliveries where no anesthesia was used, found only 10 per cent of the babies required resuscitation. In a series receiving scopolamine-morphine, he found 60 per cent had to be resuscitated, and in a group in which phenobarbital was administered, 40 per cent required resuscitation. These figures refer to a study of deliveries of full-term infants. One can easily realize the increasing danger from various analgesics given in excess to the mother in the case of the prematurely born infant.

Immediately after respiration has been initiated in the infant suffering with extreme narcosis, oxygen or oxygen-carbon dioxide therapy should be instituted.

*Provision for the Premature Delivery*—In case of expected premature labor immediate preparation should be made for the reception of the infant into a proper environment. The preparation should not be delayed until labor has begun, otherwise many premature infants will be lost. If the proper facilities cannot be furnished in the home, the mother should be persuaded to enter a hospital before confinement.

Avoidance of mechanical trauma incident to delivery, chilling of the infant, and exposure to infection are important factors in reducing mortality.

*Methods of Resuscitation*—The possibility of asphyxiation of the premature infant must be borne in mind throughout

the entire labor Any accumulation of secretions or aspirated material should be removed by inverting the child and gently wiping the mucus from the throat or by aspiration of the pharynx by means of a catheter, and in the more extreme cases, by extremely careful use of a tracheal catheter In the more extreme degrees of asphyxia a warm bath and the institution of artificial respiration by regular and very gentle compression of the chest followed by the administration of oxygen may become necessary Swinging and other forceful methods of inducing artificial respiration must never be practiced

The irritation of the catheter in the pharynx will frequently reflexively stimulate respiration If the infant appears to be recovering spontaneously, it should be left alone

Administration of oxygen, about 120 bubbles per minute, may be of value if administered through a catheter inserted in the nose or mouth or through a properly constructed mask If an oxygen chamber is available, the child should be placed in an oxygen-air mixture of 40-50 per cent oxygen

All premature infants, whether or not showing signs of asphyxiation at birth, should be carefully watched for cyanotic attacks during the first days of life, as such attacks may develop suddenly and without warning They may be due to a defective pulmonary circulation, a congenital atelectasis, or intracranial hemorrhage At other times they are precipitated by intra-abdominal distention interfering with cardiac or respiratory action Oxygen therapy offers the best single method of resuscitation

In closing, I believe it can safely be said that the interest stimulated in meeting the requirements of the premature infant has had a far-reaching effect in improving the technic employed in the care of newborn infants as a whole

Chicago mortality and morbidity rates following in the wake of the institution of our city-wide program for the care of the premature infant may be offered as evidence

104 South Michigan Ave.

## Discussion

Dr Douglas P Arnold, *Buffalo, New York*—Dr Julius Hess continues to preach to us about his "City-Wide Plan" in hopes it will stimulate us to endeavor to emulate his wonderful work which has resulted in the saving of many premature lives and in reducing the general infant mortality rate A "City-Wide Plan" it must be, the general public, the health authorities, the general practitioner, the obstetrician, and the pediatrician must become premature conscious The whole group must realize that the properly equipped hospital is the best place for these small babies They must be properly sent and early, or valuable time is lost The obstetrician must endeavor to keep these babies in the uterus as long as possible, realizing that the smaller the child the less its chance to survive He must endeavor to hand them over unharmed (i.e., no cerebral injury) This is no easy task because of the friability of the premature However, we have our pattern What are we going to do about it?

Here are reports of two hospitals in Buffalo which I think would rate high on the "scoring sheet" However, Buffalo still needs to become "Premature Conscious" If this were not so we would have more premature patients sent to the Children's Hospital

1 *Prematures, The Millard Fillmore Hospital, Buffalo, New York*—For the last two years 223, average weight 3 pounds 3 ounces (all born in the hospital) 41 died giving a mortality rate of 18.4, 28 died within twenty-four hours—if deducted, would give a rate of 5.8, 24 died in twelve hours or less, 12 died in two hours or less, 5 died in one hour or less

Included were 6 cases which were impossible to save (1) massive cerebral hemorrhage, (2) congenital hole in stomach, (3) ruptured uterus, child in abdomen, (4) spina bifida, (5) imperforate anus, (6) acrania

2 *Prematures, Buffalo Children's Hospital, Buffalo, New York*—For the last year 33, average weight 3 pounds 4 ounces (born outside hospital) 11 died giving a mortality rate of 33.3\*, 6 died within twenty-four hours—if deducted, would give a rate of 15.1, 5 died in twelve hours or less, 2 died in two hours or less, 1 died in one hour or less

I thoroughly believe in breast milk for the premature The Ingleside Home of Buffalo has a milk depot. Any extra milk is frozen by the Borden method and can be kept indefinitely

When breast milk cannot be obtained, I am in the habit of using protein milk or olac Food is only valuable when it is gotten into the child's stomach, aspiration does great harm This can

\* The rate at the Children's Hospital reported by Dr Orr at the 1936 A.M.A. meeting was 69 per cent.

often be avoided by proper tube feeding, but as Dr Hess has told us, this is only one of the many requisites in taking care of the premature and the newborn baby

Dr Burhs B Breese, Jr, *Rochester, New York*—If imitation is the sincerest form of flattery, Dr Hess should be flattered, for his work in Chicago has been imitated extensively all over the country

To me the real problem of the care of prematurity lies in the care of these infants in small communities or small institutions. As Dr Hess has shown you, about 5 per cent of all infants born are premature. This means that small institutions, such as a hospital that has 100 deliveries a year, will have only 5 premature infants to care for in the course of a year. Special nurseries or special personnel are out of the question economically.

Without doubt, the most important feature of the care of premature infants is the nurses that care for these babies. In smaller communities these nurses, in order to have sufficient clinical material must go to the recognized centers where they can get this special type of training and enough babies to care for. At present two Rochester nurses are at the Sarah

Morris Station in Chicago, getting just this training. We hope that they will come back to teach what they have learned.

But such trained personnel is expensive to small hospitals or to individuals and economically out of the question. Incubators, although relatively inexpensive, must be available.

The cost of personnel, hospitalization, and equipment for the care of these infants must be borne by someone, and at present, although I hate to admit it, the state seems to be that someone, as has been done in Massachusetts.

One other thing. It has been said that many premature infants could be saved by keeping them *in utero* longer. However, if one looks over the records of mothers who have been induced and have had premature infants, one is impressed by the fact that in the vast majority the obstetrician had no other choice and that further prolongation of pregnancy seemed out of the question either for the sake of the mother or the child. The risk of toxemia, for example, to mother and child often makes induction mandatory.

I am afraid, that with moderately good obstetrics, the improvement in premature mortality figures will still depend on what we do after rather than before the child's birth.

## INCREASED FACILITIES FOR BLOOD CULTURES IN PNEUMONIA

In the management of cases of pneumonia, cultural examination of the blood is of great importance. Isolation of the incitant is of distinct value in prognosis and as an index to the course of treatment to be followed. The findings may also be particularly helpful when more than one type of pneumococcus is found in the sputum.

Nearly all of the laboratories approved for pneumococcal type differentiation are prepared to furnish physicians with satisfactory blood culture outfits. In order to establish a similar service in districts where this facility could otherwise not be provided, the Division of Laboratories and Research of the State Department of Health as a part of the pneumonia control program, has placed blood culture outfits in supply stations designated to distribute anti-pneumococcal serums, says *Health News*. The outfit can thus be obtained by the physician as readily as the therapeutic serum.

The outfit consists of a 4-ounce prescription bottle containing beef-infusion broth with 0.12 per cent agar and 1 per cent dextrose, and fitted with a rubber stopper that can be pierced by the venipuncture needle. The stopper is covered with cellophane. The surface of the rubber stopper under this is sterile. When the blood has been collected, the cellophane cover is removed and the blood introduced. It is then mixed with the medium by tipping the bottle. No mailing case is provided, since the mailing of the outfits after the blood has been added is inadvisable.

It is expected that the blood culture will be taken to a local approved laboratory as promptly as possible. The bottle fits conveniently into the upper vest pocket where the warmth of the body may preserve the viability of the microorganisms on the trip to the laboratory during cold weather.

## A TECHNICIAN'S PRAYER

O Lord, lend sharpness to my eyes  
That with the aid of stains and dyes  
And microscope's enlarging sight,  
The little things may come to light—

The little things like germs and spores  
That make for spots and growths and sores,

Like cocci, fungi parasitic  
That once defied the analytic—  
That I may speak and say " 'Tis this,"  
Lest doctors diagnose amiss  
That pain may be relieved through me  
The tiny things, Lord, let me see.

—Composed by Fr Donald Miller and forwarded  
to the J.A.M.A. by H O G, Wisconsin

# SYPHILITIC AORTIC DISEASE

## An Analysis of 508 Cases

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THIS communication is a review of 508 cases of syphilitic aortic disease observed in the wards of the Buffalo City Hospital over a period of twelve years. During this period 143,534 cases were admitted to the wards, of which 9,129 were suffering from cardiac disease. Of this total 508 were cases of vascular syphilis, giving a relative percentage of 5.56 of the total cardiac cases. We have not included here cases of vascular syphilis that were not at some time studied on the wards.

### Criteria for Diagnosis\*

The diagnosis of syphilitic aortic disease in our study was made upon the basis of the following features: (1) enlargement of the aortic arch to percussion or by radiographic study, using as a maximum normal 5.5 cm., (2) accentuation of the second aortic sound, with or without an aortic systolic bruit, (3) aortic insufficiency with a high pulse pressure, (4) aneurysmal changes, (5) cardiac symptoms including substernal pain and paroxysmal dyspnea.

Patients with positive serology and increased retromanubrial dullness were considered as syphilitic aortitis. In many instances it was possible to confirm the latter by fluoroscopy or x-ray studies. In this group there were 187 cases of the total number studied.

There were 70 cases with enlargement of the aortic arch associated with accentuation of the aortic second sound. These, in the absence of rheumatic mitral disease, were considered as definitely syphilitic.

Aortic insufficiency was observed in a group of 155 cases. One hundred and

thirty-two of these presented the characteristic features of high pulse pressure, water-hammer pulse, capillary pulse, and in many instances Duroziez's sign. The systolic blood pressure varied greatly in this group, the majority being below 160 mm. of mercury. This is consistent with the usual low blood pressure associated with the disease.

Aneurysm of the aorta was diagnosed in 94 cases and these were confirmed radiographically or by autopsy.

### Sex, Age, and Racial Incidence

The cooperative clinic reports syphilitic disease of the aorta three times more common in the male than in the female. It occurs most often between the ages of 35 and 50 years, thus placing the greatest number of cases midway between the ages usually seen in those of rheumatic and arteriosclerotic heart disease. From the following table it can be seen that 407 or 80.1 per cent of our series were males, and 101 or 19.9 per cent were females, giving figures in accord with those of the cooperative group, since we have observed a four to one ratio.

Number of Cases	Males	Females
508	407—80.1%	101—19.9%

Subdivision of this total number into the various stages of syphilitic heart disease gives similar findings.

Disease	Male Cases	Female Cases	Per Cent Ratio
Aortitis	202	55	72.8 27.2
Aortic insufficiency	127	30	80.2 19.8
Aneurysm	81	13	86.7 13.3

The age incidence of syphilitic heart disease as reported in the literature occurs most frequently between 35 and 55 years. In a report by R. W. Scott<sup>2</sup> the

\* The above, except aortic insufficiency in the presence of positive serology or history of antisymphilitic therapy.



FIG 1 Mitral orifice showing fusion and thickening of the chordae tendinae and scar deforming of the cusps with several minute wartlike vegetations



FIG 2 Aortic orifice exhibiting the basic scar thickening, with vegetations and an irregular perforation. The mesial mitral leaflet below to right. Characteristic wrinkling of syphilitic mesoaortitis about the coronary orifice.

youngest was 34 and oldest 64. The youngest case in our records occurred in a white male of 21 years who was diagnosed clinically as having congenital syphilis and on postmortem examination was found to have cardiovascular involvement. Our findings are in accord with those of other observers, since 301 or 78.8 per cent of the total number occurred between 31 and 60 years of age

Age Incidence	Number of Cases	Percentage
20-30	34	6.7
31-40	95	18.7
41-50	171	33.6
51-60	135	26.5
61-70	61	12.1
71-80	10	1.9
81-90	2	0.4

The majority of patients admitted to the wards are white, but we do have a fair percentage of colored patients. The racial distribution of syphilitic disease is included in the following tabular outline

Race Distribution	Aortitis	Aortic Insufficiency	Aneurysm	Total
White	193	110	73	376
Negro	58	43	19	120
Indian	3	1	2	6
Chinese	3	3	0	6

### Interval Between Primary Lesion and Syphilitic Vascular Involvement

Since vascular disease is considered as a tertiary manifestation of syphilis, it is of interest to note that the majority of cases develop involvement of the aorta, with recognizable clinical manifestations within ten to twenty years after the onset of the primary lesion. However, many times the primary lesion is either forgotten or ignored, and it is only possible for us to report this interval on a portion of our cases

Interval in Years	Number of Cases	Percentage
0-1	2	2.1
2-5	11	7.2
6-10	24	15.6
11-20	47	30.6
21-30	46	30.3
31-40	22	15.5

In a report by Cole and Ullston<sup>1</sup> aneurysm developed in 12 per cent of all persons with syphilis admitted to the cooperative clinics, and in 50 per cent this occurred between fifteen to twenty-five years after the primary infection. In the 94 cases, observed in our group, that presented either clinical evidence or

aneurysm revealed by necropsy, only 29 gave a history of a primary lesion, and we found 65.5 per cent occurring between the reported age intervals

Interval in Years Between Primary and Aneurysm	Number of Cases	Percentage
1-10	4	13.9
11-20	9	31
21-30	10	34.5
31-40	5	17
41-50	1	3.4

### Clinical Features

Cardiovascular syphilis, uncomplicated, is frequently overlooked in its early stages due undoubtedly to the long silent period of the disease. The commonest symptoms complained of in the group studied were (1) dyspnea, observed in 242 cases, (2) substernal pain, complained of in 117 cases and observed equally as often in the early as in the late cases, (3) cough, present in 62 cases and dry and hacking in type, (4) congestive failure, with all its manifestations, present in 140 cases.

Physical signs of aortitis, including enlargement, by clinical and fluoroscopic methods, as well as roughening of the aortic second sound, have already been referred to. There were 155 cases of aortic insufficiency of which 132 showed the typical features and complications of this disease, whereas 23 showed only the cardiac murmurs alone. Aneurysm, as already stated, was found in 94 cases and the observations revealed the location as follows:

Ascending aorta	63
Descending aorta	4
Transverse	21
Abdominal aorta	6

The complement fixation reaction as representative of the presence of syphilitic infection was reported in 463 cases, being positive in 399 of these. Reports were inadequate in 45 cases.

Concomitant central nervous system involvement was present in 141 cases. This was diagnosed clinically by pupillary, tendon, and reflex arc reactions. Of this number 43 had lumbar puncture in which positive spinal Wassermann tests

were obtained in 38 instances. Other syphilitic manifestations observed in this series of cardiovascular syphilis and as recorded at necropsy were:

	Cases
Gumma of the liver	10
Syphilitic hepatitis	6
Nodular ulcerative syphilis III of skin	14
Optic atrophy	4
Gumma of the hip	1
Syphilitic pharyngitis	1
Gumma tongue	1
Gumma spinal cord	1

### Recorded Amount of Antisyphilitic Treatment

We have attempted to ascertain the amount of antisyphilitic therapy that patients had had prior to our diagnosis of vascular syphilis. This was extremely difficult, since many of these were unaware of the presence of the disease until the appearance of cardiac complaints and the diagnosis established. In the series studied only 237 cases gave a history of having had some form of therapy, whereas 241 gave a history of no treatment.

At the Buffalo City Hospital the accepted amount of treatment considered as adequate includes thirty-two intravenous injections of an arsenical and sixty intramuscular injections of some heavy metal. On this basis only 147 cases of the group studied could be considered as adequately treated. It has been our practice to treat cases with moderate aortitis by the injection of small doses of the heavy metals in association with other forms of symptomatic therapy when indicated. In the presence of aortic insufficiency associated with failure, antisyphilitic treatment, in our experience, has been of little value. In the same condition we have found the response to digitalis less valuable than in other forms of heart disease. Arrhythmia, especially fibrillation, was absent in syphilitic aortic disease, unless associated with arteriosclerotic heart disease, a feature that was present in 31 cases. We have found that rest, sedatives, and mercurial diuretics are more effective in the management of failure than digitalis, and in most instances,

once failure was established, the duration of life was less than two years

### Mortality

The mortality of cardiovascular syphilis in the stage of decompensation is high, while in the uncomplicated aortitis, the prognosis must also be guarded. In aortic insufficiency and in aneurysm our mortality figures are shown in the table below

	Aortitis	Percentage
Living	183	74 5
Dead	74	28 5
	Aortic Insufficiency	
Living	75	47 7
Dead	82	52 3
	Aneurysm	
Living	37	39 2
Dead	57	60 8
	Total Mortality	
Living	295	58 07
Dead	213	41 93

The following is a clinical and pathologic report of an unusual case of mixed heart disease

### Case Report

Case number 89447, a married colored male, aged 42, was first associated with the hospital in 1931, at which time a requested x-ray examination of his heart and lungs was negative. Nothing further was heard of this patient until June, 1937, when he was admitted to the medical service. His history at this time was that he had developed an upper respiratory tract infection a month previously, from which recovery was not complete, and that he had been left with a residual dyspnea, most marked upon exertion. There was also a constant palpitation of the heart and a burning precordial sensation. For a week prior to admission a profound orthopnea developed which resulted in his awakening three or four times nightly. His past history revealed that at 15 years of age he had acquired a chancre for which he was not treated. He had had gonorrhea and malaria at 25 years of age and, previous to that, the usual childhood diseases of chicken pox, mumps, measles, and pertussis (no history of rheumatic infections). The family history was that his wife had had one miscarriage, one stillbirth, and two living normal children. Examination of the patient revealed a well nourished and well-developed colored male.

Pupils were equal, regular, and active to light. Nose and throat were negative, neck vessels were engorged and visibly pulsating, lungs showed basal congestion. The heart was enlarged in all diameters, regular in rate 90 to 110, a to-and-fro murmur was heard over the aortic and mitral valve areas, with a gallop rhythm in the mitral region. Blood pressure 130/40, the pulse was of the water-hammer type, and femoral Duroziez's sign was present. The liver was enlarged to palpation, and the extremities were edematous. Reflexes were essentially within normal limits. Laboratory studies, blood chemistry, urinalysis, and blood count were normal. Wassermann and Kahn tests were strongly positive. Electrocardiogram showed a left ventricular preponderance. Under rest, digitalis, sedatives, and intramuscular bismuth injections, the patient improved and left the hospital three weeks after admission. He remained home for three weeks when he was again admitted to the hospital complaining of marked dyspnea especially at night, dull precordial pain, and swelling of the feet and ankles. The observations at this time revealed considerable pulmonary and hepatic congestion. The heart was considerably enlarged and double murmurs were heard over the aortic and mitral regions as before. The heart rate was regular and blood pressure 120/60. The laboratory tests were as in the first admission and the temperature was normal. Patient did not respond to treatment and expired within eighteen days.

Clinical impressions were aortitis syphilitica, with aortic insufficiency, myocardial hypertrophy and dilatation, congestive heart failure.

### Autopsy Report by Dr. William F. Jacobs

**Chest.** The right pleural space contained 1,000 cc and the left pleural space about 700 cc of a pinkish-yellow serous fluid. The lungs were collapsed only partially. Crepitus was present throughout. The mucous membranes of the tracheobronchial tree were pinkish in color, while in the smaller bronchi there was a small quantity of blood-stained serous fluid. There was exudation of a frothy hemorrhagically colored fluid from the cut surface on compression of the lungs. The tracheobronchial lymph nodes showed anthracotic pigment.

**Heart.** The pericardium appeared normal and contained a small quantity of pericardial fluid. The heart was greatly increased in size and its surface color was of a pale reddish brown. On opening into the heart the left ventricular wall measured from 10-23 mm in thickness, the right from 4-6 mm in thickness. The mitral valve orifice measured 9 cm in circumference. The



valve was thickened and showed numerous veruca-like vegetations along the free edge of the valve. These vegetations extended up on the surface of the valve and onto the mural endocardium, also on the chordae tendineae and under surface of the leaflets onto the endocardium of the mitral valves and cusps. The aortic valve orifice measured 8 cm in circumference. The valve leaflets presented many vegetations, particularly on the ventricular surface of the valve. Two of the cusps showed a complete perforation. The tricuspid valve measured 9.5 cm in circumference. The coronary arteries showed nothing remarkable.

The aorta. In the aorta close to the valves there were several 1-cm plaques that showed longitudinal wrinkling as in syphilitic lesions. On the intimal surface of the ascending portion of the aorta were small, soft, yellow plaques of atherosclerosis. Several centimeters above the aortic cusps was a small aneurysmal dilatation that admitted the tip of the little finger.

The liver and spleen were both increased in size. The spleen showed grossly an increased amount of fibrous tissue and several healed and one healing depressed areas on the inferolateral border.

The kidneys were smaller than normal and the capsules stripped, easily carrying small portions of the cortical tissue with it. The surface of both kidneys showed several pea- to bean-sized depressed areas, which, on section, showed a scar of fibrous tissue.

The sections of the heart muscle exhibited thickening sclerosis of the branches of the coronary, the outline being indicated by scattered small round cells in the walls. Patches of hyalinized sclerosis around some of the larger vessels were the only suggestive relic of the Aschoff's nodule. The section through the valves revealed the diffuse hyalinized fibrosis, devoid of vascularity with patches of disintegration, granular debris, but no leukocytes or other signs of active inflammatory reaction.

All other tissue sections from the various organs revealed the characteristic picture of chronic congestion.

Anatomical diagnosis was old mitral rheumatic endocarditis, aortic endocarditis, syphilitic mesoaortitis with aneurysm, cardiac hypertrophy and dilatation, multiple healed infarcts in spleen and kidneys, chronic passive congestion of liver and spleen.

## Summary

We have reviewed a series of 508 cases of syphilitic aortic disease and presented an unusual case of mixed heart disease.

## References

1. Cole and Ulliston. Arch. Int. Med. 57. No. 5 (May) 1936.
2. Padgett and Moore. Arch. Int. Med. 58. No. 1 (Nov.) 1936.
3. Moore. Arch. Int. Med. 56. No. 6 (Nov.) 1935.
4. Textbook of Pathology. Boyd.

## RAVINGS OF AN IMPATIENT PATIENT

When your arches are flat and your legs are weak  
And your pipes are so sore you can hardly speak,  
Though you've tried all the tonics that could be  
bought,

And have gargled the stuff that the neighbors  
brought

When the hundred and sixty that was your  
weight

Has descended to something like ninety-eight  
Till the meat on your skeleton scarce would feed  
A microbe's family that were in need

Tho' you've swallowed the pills to make you fat  
Filled with vitamins this and vitamins that  
When the daily dozen has failed to score  
Tho' each morning you worked on the bedroom  
floor

When your headache is worse than it's even been  
And your "schnozzle" won't breathe—either  
out or in

When your tummy burns like a ball of fire,  
And your old "tucker" squeaks like a punctured  
tire

When you've aches and pains from stem to stern  
And your bunions hurt and your tonsils burn

When your brain won't think and your breath  
comes fast  
And you figure your time has come at last

When you've taken your pills, pink, white and  
brown  
And your blood pressure won't stay up or down  
When they've given you hot shots in your wing  
That the specialist said was the proper thing

When the "medics" have tried out all they know  
And have told you that you don't have a show  
When your friends have wished you a fond fare-  
well  
And your enemies hope you will go to H—

When you've borrowed the money your friends  
have lent  
Which the M D's have taken with good intent  
But have failed to "deliver the goods" to date  
And you feel yourself slipping and cannot wait

You have tried and tried and now at last  
You know you have gotten no better fast!  
I ask your advice (if advice is free)  
Just what would you do, if you were me?

—Relayed by E C E, California, to the J.A.M.A.

# AMATEUR MEDICAL CINEMATOGRAPHY

BOARDMAN M. BOSWORTH, M.D., New York City

FOR those medical practitioners who are interested in amateur photography the taking of motion pictures offers a practically unlimited field for diversion and profit. Motion pictures cannot be excelled in clarity, brevity, and interest as a medium for the presentation of medical subjects at scientific gatherings and for the instruction of interns, medical students, and nurses.

It is the purpose of this article to encourage the taking of medical motion pictures by pointing out some of the more common photographic pitfalls encountered by the amateur and the means by which they may easily be avoided.

## 1 Subject Matter

Be on the lookout for the vivid and unusual. Select cases that can be followed through (Fig. 1), showing stages of progress and end result. Include x-rays wherever possible. A few simple diagrams will often add immeasurably to the clarity of a film. It is interesting to work out a motion picture of a special operation or procedure or to show the coordinating activities of the different departments of a clinic.<sup>1</sup> In all such work it is best to spend more time planning than taking the picture.

Provide a contrasting background for the subject so as to set it out. This is just as important in color as in black-and-white photography. Especial attention should be given to action. This is a prime requisite if loss of interest is to be avoided. No matter what the particular lesion may be, interest in it will be enhanced by motion of one kind or another. For example, in filming an extensive burn, instead of taking a straight picture of the wound, have the part slowly turned to bring the lesion into full view.

It is well also to plan a considerable variety in subject matter. Change frequently from full-length or half-figure to close-up, and even in close-ups there is ample room for variation. A change, for instance, from 4 feet to 18 inches in camera-subject distance produces a more marked effect on the screen than one would anticipate. It may be accomplished without disturbing camera or lights by means of one or more telephoto lenses. Similarly, much can be added to the interest of the most routine picture by the careful selection of unusual angles from which to film the subject and by shifting occasionally from one vantage point to another.

## 2. Length

As a rule, a major surgical procedure will require from 200 to 300 feet of film. This means a projection time of eight to twelve minutes. If the picture is longer than this, it will generally be found that (1) too much film has been devoted to repetitious actions such as suturing, (2) the explanatory titles are too frequent and verbose, or (3) the operator has been unduly slow in his work—any one of which faults will detract greatly from the finished picture. The usual story can be told well inside of fifteen minutes. More than that tends to tire a professional audience, less than that will usually win hearty approval.

Individual sequences are subject to even stricter limitation. Rare indeed are the "shots" of less than five feet of film that are not merely an aggravation when viewed on the screen. Eight to ten feet is the average necessary for a satisfactory picture, more than fifteen feet is apt to prove tedious.

## 3 Titles

Brevity, conciseness, and clarity should be stressed. There are many technically

<sup>1</sup>Grateful acknowledgment is made to Dr. Olive S. Bosworth for the drawings which form a part of this paper.



FIG 1a C W Severe comminution of humerus with nerves and blood vessels intact



FIG 1c Present result, three years later, following unsuccessful attempt at bone transplant from tibia Flail arm but useful hand



FIG 1b X-ray of humerus, on admission

perfect films that have fallen flat because of faulty titles and subheads. These faults may be few but they loom large on the screen. The fewer titles one is forced to read the better, the picture in the main should tell its own story—if it doesn't, titles won't help. It is tiresome to sit and read through line after line of involved description, which could be grasped so much more easily, quickly,

and vividly from the moving picture itself.

Make the titles interesting as well as brief. This calls for much careful thought. Say something in an unusual way and you will catch the attention of the audience. The amateur ambitious enough to make his own titles will find the homemade device (Fig 2) simple and efficient.

At one end of a  $2\frac{1}{2}$ -foot board a camera bracket is mounted. This can be a simple metal plate, with a hole in its center for camera screw, supported between two wooden blocks. At the far end of the board a screen is erected consisting of the ordinary black felt-covered board with interchangeable white celluloid letters and figures, used by small restaurants for displaying menus. These letters,  $\frac{3}{4}$  of an inch high for capitals and  $\frac{1}{2}$  inch size for small letters, make a very effective title when photographed, at the distance mentioned above, on a screen measuring  $7\frac{1}{2}$  by  $10\frac{1}{2}$  inches. A single photoflood bulb in reflector

mounted behind and above the camera furnishes good illumination with a stop of F 28, using ordinary panchromatic film

The camera will have to be adjusted accurately to the screen by a process of trial and error, taking a few "frames" of a white paper, ruled with heavy black lines at right angles to each other, fastened temporarily to the screen. When the proper position of the camera is finally determined, it may be made permanent by fastening any convenient form of "guide-stop" to the camera mount, so that the camera will bear the same relation to the screen each time it is mounted

For typewritten titles of course a shorter board is required. However, the same board may be modified by the erection of a smaller removable screen at a shorter distance

#### 4 Lighting

Flat illumination usually is essential, particularly for color photography.<sup>2</sup> But there are times when it is ineffective, as, for instance, when strong shadows should be enhanced to make motion more startling (Fig 3). Here the accepted type of illumination would have produced a flat and insipid picture. By strongly oblique lighting, the ridges formed by the gut moving beneath the tense abdominal wall were thrown into marked accentuation

Usually, however, one seeks to discourage strong shadows. This is done by superimposing light on the subject from two widely separated angles and oftentimes from above as well. If an overhead light be employed as an accessory, it need not be counted in estimating the required exposure as it has little actinic value

#### 5 Equipment

While a camera and a few lights are the only essentials, a tripod, range finder, and good exposure meter will be found useful adjuncts

Modern amateur cinema cameras use either eight- or sixteen-millimeter film

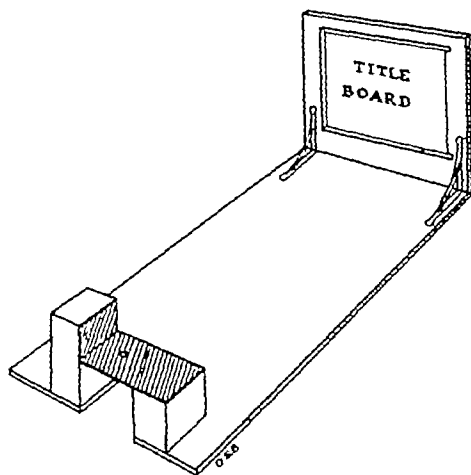


FIG 2

The eight-millimeter camera will give as satisfactory results as the sixteen. But the latter is preferable when exhibition to large groups is contemplated, as the greater projection distance increases the screen magnification

The lens is far more important than the camera. While the standard F 3.5 lens gives slightly superior results where the light is ample, a lens of wider aperture (F 1.9 or F 1.5) is better when pictures are taken under difficult light conditions, as in the operating room. A one-inch (25-mm) lens should be supplemented with one or more longer focus lenses to permit close action shots without changing the photographic setup

An ordinary number 1 photoflood bulb is the most convenient lighting unit. Six of these bulbs, mounted in a couple of reflectors, provide adequate illumination for color pictures.<sup>2</sup> Each bulb is rated 750 watts and has a two-hour life

For convenience in filming operative pictures at fairly close range without a tripod, a simple light bracket for direct attachment to the camera can easily be made by anyone handy with tools.<sup>3</sup> This device obviates the use of tripod for either camera or lights as the lights are held with the camera by the photographer. But it cannot be used for color work unless extra photofloods are added. For color film, larger reflectors, more



FIG 3 Intestinal obstruction, showing marked peristalsis

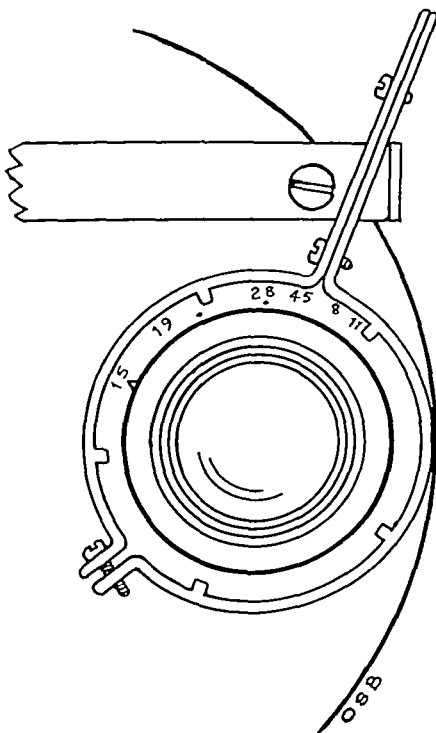


FIG 4a Front view

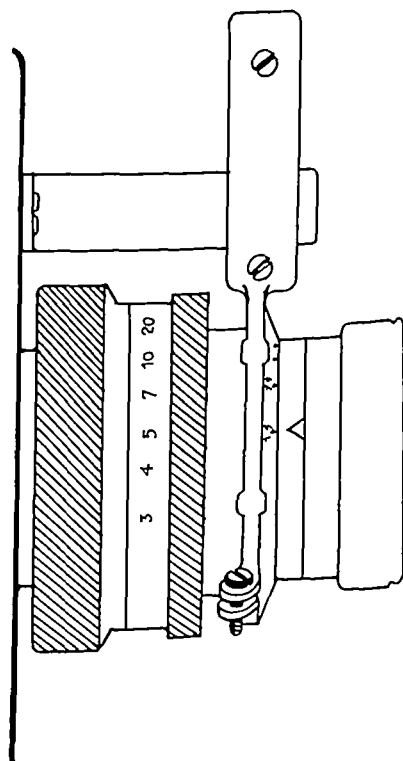


FIG 4b Side view

lights, and a tripod support are advised.<sup>2</sup>

Unless the camera used is equipped with a reflex focusing device, anyone who plans to film many operations should have a range finder, which works on the principle of parallax, to determine camera-subject distance quickly and accurately. A photoelectric eye exposure meter, such as the Weston, is also a worth-while investment, especially in color photography where accurate exposure is essential.

## 6 Special Effects

Fade-in and fade-out effects and dissolves can be obtained with even the least expensive camera by a little extra effort on the part of the photographer. Most operative pictures require a rather large lens aperture. By starting with the iris closed and gradually opening it to the correct stop over the first foot of film, a good fade-in may be secured. For a fade-out the process is reversed. For convenience in moving the iris, a small metal lever can be attached by circular collar clamp to a lens with adjustable iris, a right-angled strip of metal screwed to the front of the camera will automatically stop the lever when the predetermined aperture is reached (Fig. 4).

On the standard camera, dissolves are an arduous undertaking and hardly worth the effort, yet they can be taken. Where a dissolve is planned, a fade-out is secured, film footage is noted and the remainder of the film run through with lens covered, film is then rewound (a projector in a dark closet will do it nicely), after the film is replaced in the camera, it is run through (with lens covered) to the beginning of the fade-out, a fade-in is now made over the

fade-out and the dissolve is complete. Dissolves must be planned in advance and the film marked when first loaded so that it can be reloaded at exactly the same frame. On the more expensive modern cameras, of course, these effects are quickly and simply secured while the picture is being taken, through an extra shutter and a re-wind device.

If a thin plate of finely-ground glass be substituted for the homemade title screen already described, at two and a half feet, it is possible to take good duplications of your own motion pictures (or "stills") by projecting the pictures toward the camera, the ground glass intervening, in a darkened room. The projected picture should, of course, first be focused on the ground-glass screen. It must be remembered, however, that the duplicated picture will be in reverse when finally seen on the screen.

## Conclusion

Regardless of the effort spent in taking the picture, final results will depend on the most important work of all—that of cutting and editing. The film must be critically analyzed, bit by bit, and all redundant, repetitious, and extraneous sequences ruthlessly clipped. Vital portions poorly photographed must be retaken. The amateur's capacity for self-criticism in the cutting process will determine, to a large extent, his success or failure as a medical photographer.

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## References

1. Treatment of a Primigravida. 1933. 16 mm. 2 reels. From the Woman's Clinic, New York Hospital service of H. J. Stander, M.D.
2. Bosworth B. M. New York State J. Med. 38: 273 (Feb. 15) 1938.
3. Bosworth B. M. New York State J. Med. 36: 856 (1936).

## A MORNING THOUGHT

When one's all right, he's prone to spite  
The doctor's peaceful mission,  
But when he's sick, it's loud and quick  
He bawls for a physician—*Eugene Field*

## HARP AND CROWN WILL BE HIS

A Denver druggist distributes handbills extolling the doctor's prescription as "A Sacred Document" and discouraging "counter-prescribing."

# CHANGING FACTORS IN DIPHTHERIA IMMUNITY

## Its Production and Duration

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COMMUNITY protection against diphtheria has been and still is an important activity of the official health agencies, and protection of the individual child has become a routine procedure in good medical practice. Attempts have been made to provide this protection by the artificial immunization of a sufficiently large fraction of the population, especially of the age group of greatest natural susceptibility, to prevent the occurrence of the disease in epidemic proportions.

As shown in Fig 1, prior to the general application of the process of artificial immunization in New York State, there was a gradual but consistent decrease in mortality from diphtheria, indicating a definite downward trend unrelated insofar as is known to other than natural processes. The use of antitoxin in the treatment of diphtheria which became general in this state between 1910 and 1920 is not obviously reflected in diphtheria mortality as shown in Fig 1. A marked acceleration in the decrease in mortality may be noted at a point coincident with the artificial immunization of an increased proportion of individuals in the age group of highest mortality.

Fig 2 shows by years the proportion of the population of the state under 5 years of age known to have been given immunizing treatment. The acceleration in the decrease in mortality from diphtheria coincides roughly with the increase in proportion of the population of the state under 5 years of age known to have been given artificial immunizing treatment. That some factor tending to lower mortality from diphtheria has been in operation at least since 1900 seems obvious, but it seems probable that arti-

ficial immunization is responsible for the acceleration in this decrease in recent years.

During the period in which artificial immunization has been practiced generally in New York State, three different immunizing agents have been used extensively. As shown in Fig 3, only toxin antitoxin was distributed by the Division of Laboratories and Research of the New York State Department of Health from 1917 until 1931. From 1931 to 1934 fluid toxoid was used increasingly and almost completely replaced toxin antitoxin by 1934. Beginning in 1935, alum precipitated toxoid was distributed, and since 1936 a large proportion of all immunizing treatments have been with this agent.

It is believed that in New York State the distribution of the various immunizing agents by the Division of Laboratories and Research is a reasonably accurate index of the proportion of immunizing treatments given with the various agents. Relatively few immunizing treatments are given other than with products supplied by the New York State Department of Health.

The comparative efficacy of the different agents is of interest to the public health administrator and to the practicing physician alike. The duration of the immunity produced by artificial stimulation is also of importance. The immediate efficacy of a diphtheria immunizing agent may be measured roughly in terms of circulating antitoxin by means of the Schuck test a short time after the immunizing treatment has been completed. The duration of this type of immunity may be similarly measured by

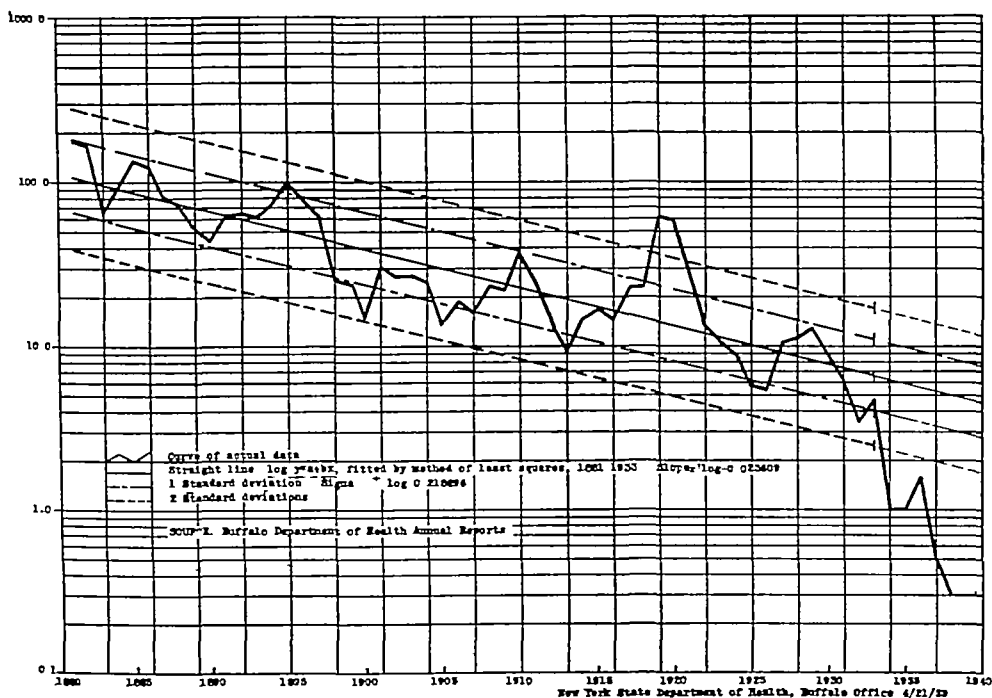


CHART 1 Recorded diphtheria mortality rates per 100,000 population, Buffalo New York 1881-1938

testing at varying intervals following the immunizing treatment

The immunity status of a group of individuals as measured by a Schick test survey, however, represents the result of the combined effects of artificial and natural immunizing processes. The factor of the natural immunizing processes may be reasonably assumed to be constant in a circumscribed homogeneous group of individuals at a given time, and differences observed in the immunity of individuals treated with different immunizing agents may be attributed to differences in the efficacy of the immunizing agent, but, as will be shown later, natural immunization may differ at different times.

Table 1 shows the results of Schick tests in groups of individuals in two New York State cities in 1938. It was possible to verify the history of immunization, the immunizing agent used, and the time interval since the immunizing treatment. It may be noted that in both surveys differences in the proportion of

individuals rendered Schick negative by the different immunizing agents were observed and that these differences were similar in the two areas studied. The proportion of individuals showing a negative Schick reaction following toxin antitoxin and alum precipitated toxoid is not materially different, but the percentage of negative Schick reactions following treatment with fluid toxoid is distinctly lower than following either of the other immunizing agents.

The mean age of the group who have been treated with toxin antitoxin was approximately seven years greater than that of the group given alum precipitated toxoid and five years greater than that of the individuals given fluid toxoid. It seems probable, therefore, that natural immunizing processes would have had a greater effect in the group given toxin antitoxin than either of the other groups. Moreover, as will be shown later, there is evidence that natural stimulation of immunity in at least one of



FIGURE 1

DIPHTHERIA MORTALITY RATES PER 100,000 POPULATION: NEW YORK STATE, EXCLUSIVE OF NEW YORK CITY 1898-1937

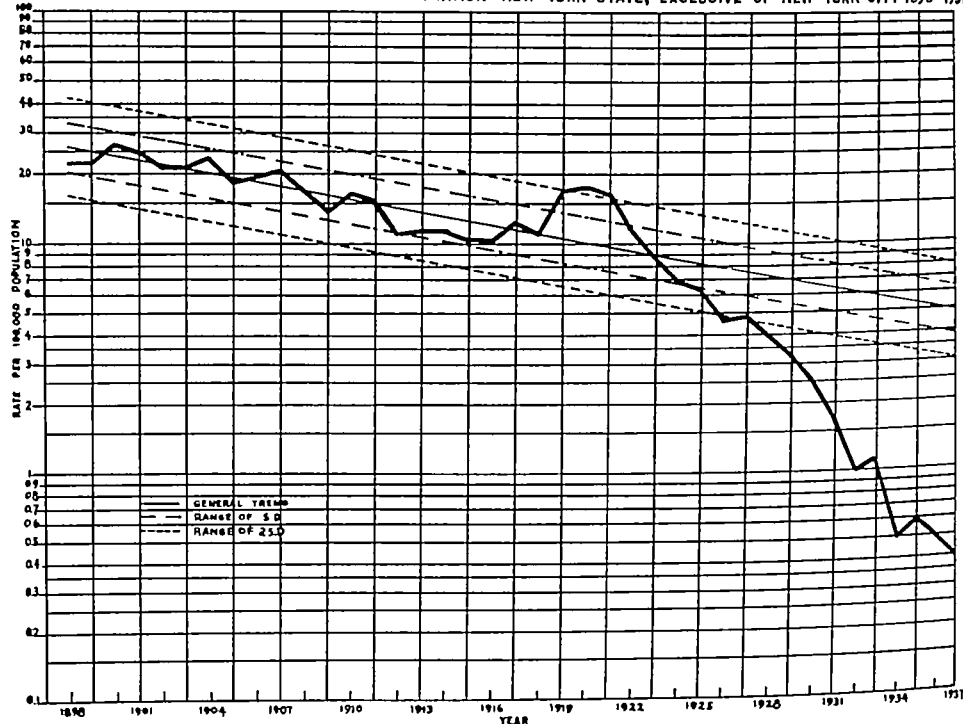


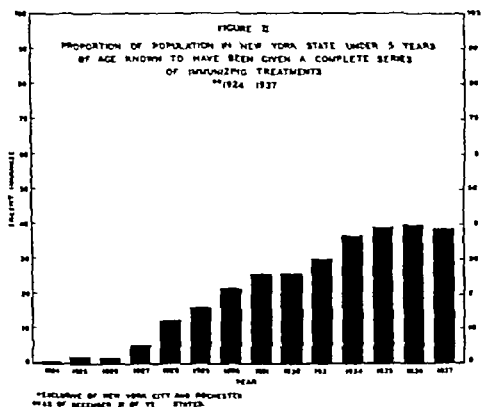
TABLE 1—SCHICK TEST STUDY

Kingston New York March-April 1938 Binghamton New York March-September 1938  
Schick Test Reactions Among Individuals Previously Immunized According to Immunizing Agent Given

Immunizing Agent and Time Interval Since Treatment	Schick Test Results— Kingston study			Schick Test Results— Binghamton study			Schick Test Results— Two studies combined		
	Number tested	No	Per-centage	Number tested	No	Per-centage	Number tested	No	Per-centage
Toxin antitoxin (10 years and over)	503	459	91.3	188	173	92.0	691	632	91.5
Toxin antitoxin (less than 10 years)	598	563	94.1	1,000	925	87.3	1,658	1,488	89.7
Toxoid (2-5 years)	124	72	58.1	1,040	743	71.4	1,164	815	70.0
Alum precipitated toxoid (0-4 years)	142	97	68.3	660	594	90.0	802	691	86.2

these areas was in all probability less during the period in which fluid toxoid and alum precipitated toxoid were used. These surveys would seem to indicate that the immunizing effect of fluid toxoid as measured by the Schick test was distinctly less than that of alum precipitated toxoid. There was very probably a greater natural stimulation of immunity during the period in which toxin antitoxin was given than during the period when the other two immunizing agents were used, and this factor makes comparisons with that group of questionable validity.

The ultimate test of any immunizing agent is its efficacy in the prevention of the disease for which it is specific. Since 1927 in upstate New York, exclusive of Buffalo, Rochester, and Syracuse, insofar as possible, all cases reported as occurring in persons previously immunized have been investigated, and an attempt made to verify the history of a previous immunizing treatment and to verify the diagnosis of diphtheria. Table 2 shows the number of reported cases of diphtheria in persons previously "immunized" according to the agent employed. It is, of course, obvious that the considerably



greater number of cases of diphtheria in individuals treated with toxin antitoxin is due in a large measure to the greater number of individuals having been given this agent, the greater period of exposure to possible infection, and the presumably greater risk of infection due to a higher incidence of diphtheria during the earlier period in which toxin antitoxin was the only immunizing agent used. Table 3 shows the reported cases of diphtheria among individuals with a verified history of immunization, with the various immunizing agents for four-year periods following the immunizing treatment.

In order to compare the incidence of the disease in the different groups unimmunized by the differences in period of possible exposure, attack rates are shown according to the person-years of exposure in the different groups. The differences in attack rates are not necessarily indicative of the efficacy of the different agents, however, due to the definitely greater risk of infection during the earlier periods.

The development of immunity in the absence of a history of clinical diphtheria or artificial immunizing treatment obviously occurs, and natural immunization, presumably the result of subclinical infection or infestation with the specific organisms, has repeatedly been shown to result in an increased proportion of immune individuals with increasing age. The rate of increase and the proportion of immunes varies in different population

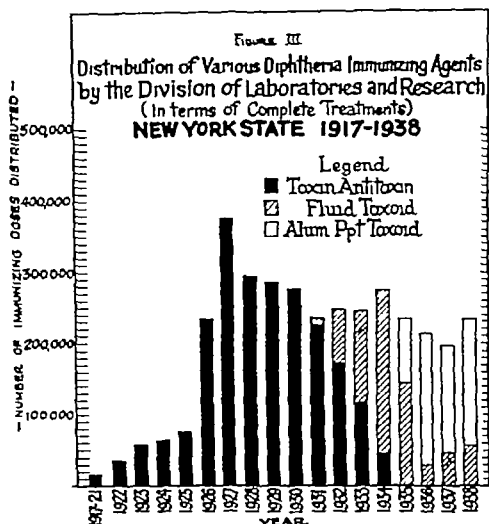


TABLE 2—REPORTED DIPHTHERIA CASES AMONG INDIVIDUALS WITH A VERIFIED HISTORY OF IMMUNIZATION ACCORDING TO IMMUNIZING AGENT GIVEN  
New York State Exclusive of New York City, Buffalo, Rochester, Syracuse and Institutions 1927-1938

Year	Diphtheria Cases Previously Immunized			Total Cases of Diphtheria Among Immunized Population	All Cases of Diphtheria Reported
	Toxin anti-toxin	Fluid toxoid	Alum ppt. toxoid		
1927	93			93	2 583
1928	127			127	1 830
1929	114			114	1 398
1930	101			101	1 018
1931	104			104	788
1932	55			60	434
1933	68	8		74	459
1934	61	12		53	327
1935	62	18	1	71	334
1936	22	24	4	50	207
1937	15	9	9	33	157
1938	9	10	12	31	103
Total	799	86	26	911	9 674
Estimated total immunized individuals at risk	829 900	207 400	157 500	1 194 800	

groups and is apparently dependent upon the prevalence of the infectious agent, either in the form of clinical disease or healthy carrier infection, and upon the opportunities for dissemination of both types of infection. The rapidity of the increase in the proportion of immunes in the population with increasing age is greater in urban areas than in rural areas.

It has been clearly shown that carriers of virulent diphtheria bacilli are fre-

TABLE 3—REPORTED DIPHTHERIA CASES AMONG INDIVIDUALS WITH A VERIFIED HISTORY OF IMMUNIZATION ACCORDING TO IMMUNIZING AGENT GIVEN AND TIME INTERVAL SINCE IMMUNIZATION

New York State Exclusive of New York City Buffalo  
Rochester, Syracuse and Institutions

Time Interval Between Immunization and Date of Onset of Diphtheria	Diphtheria Cases Previously Immunized'		
	Toxin ant toxin (1927- 1930)	Fluid toxoid (1932- 1935)	Alum ppt. toxoid (1935- 1938)
Under 1 year	215	18	8
1-2 years	113	17	8
2-3 years	51	6	9
3-4 years	26	1	1
Total	405	42	26
Estimated total immunized individuals at risk in per son exposure years	1 884,400	386 100	367 200
Attack rate per 100 000 person exposure years	21.5	10.9	7.1

TABLE 4—DIPHTHERIA CARRIER SURVEYS

	Number of Persons Examined	C Diph theriae Isolated		Toxicogenic C Diph theriae Isolated	
		Num ber	Per centage	Num ber	Per centage
Kingston Jan - May 1938	1 481	15	1.0	1	0.068
Kingston Nov - Dec., 1938	1 742	26	1.5	0	—
Total Kingston 1938	3 223	41	1.3	1	0.031
Ossining Jan - Feb 1939	1 091	9	0.8	3	0.275

quently found among persons in contact with clinical cases of diphtheria and also that the prevalence of carriers in the general population varies widely in different areas and at different times in the same area. A definite seasonal variation in the prevalence of carriers has been observed. It has been assumed that natural immunization results largely from subclinical infection with C diphtheriae resulting from contact with carriers.

With the marked decrease in diphtheria morbidity, it might be expected that carriers of the organisms would be less prevalent with a resultant decrease in natural stimulation of immunity. Diphtheria carrier surveys, differing somewhat in their history of diphtheria prevalence, have been carried out in two areas. Diphtheria has become an extremely rare disease in the City of Kingston in recent years. The average annual number of cases in Kingston for the period 1918 to 1922 was 60 cases, for the period 1923 to 1927, 14 cases, and for the period

1928 to 1932, 3 cases. No cases of diphtheria occurred in the City of Kingston from 1933 to 1937. As shown in Table 4, of 3,223 persons in the age group 5-14 years cultured in 1938, 41 or 1.3 per cent were found to be carriers of morphologically and culturally characteristic C diphtheriae. Only one was found to be a carrier of virulent organisms, a carrier rate for toxigenic organisms of 0.031 per cent.

The incidence of clinical diphtheria in the City of Ossining showed a similar reduction until September, 1938, when a small outbreak of diphtheria occurred. The carrier survey made in January and February, 1939, in Ossining revealed a prevalence of morphologically and culturally characteristic C diphtheriae not significantly different from that observed in Kingston. This survey, however, showed a significantly higher incidence of virulent organisms, indicating a greater prevalence of virulent C diphtheriae associated with increased prevalence of clinical diphtheria.

That the prevalence of carriers of virulent organisms in a community associated with a relatively high incidence of clinical diphtheria might result in an increased natural stimulation to immunity has been suggested. A measure of the rapidity of natural immunization of individuals under exposure in groups in which clinical diphtheria occurred with varying frequency is of interest. A Schick test survey was made in Kingston in 1922 at a time when clinical diphtheria was prevalent and had been prevalent for a period of years, but prior to artificial immunization against diphtheria. A similar survey of individuals giving no history of artificial immunization was made in the same city in 1938. Table 5 shows the results of these two surveys according to age groups. It may be noted that while the proportion of the entire group tested in the two surveys found to be Schick negative was not different, the proportion of individuals in the younger age groups showing immunity as measured by the Schick test is significantly higher in 1922 than in

1938, indicating a more rapid process of natural immunization in 1922

### Summary and Conclusions

An analysis of reported mortality from diphtheria in New York State from 1898 to 1937 seems to indicate that some factor tending to reduce mortality has been in operation at least since 1900, but that the rapid acceleration in the decrease in mortality in recent years coincides with the increase in artificial immunization

An attempt was made to measure the comparative efficacy of the three different immunizing agents used extensively in the state in terms of immunity as measured by Schick test surveys and by the incidence of clinical diphtheria among the groups of individuals given immunizing treatments with the different agents. The gross results of treatment with the different agents, measured by Schick test surveys in two cities in 1938, seem to indicate no difference in the efficacy of toxin antitoxin and alum precipitated toxoid but significantly inferior results following fluid toxoid

The incidence of clinical diphtheria in groups of individuals having been immunized with the different agents was compared, but due to the probable differences in risk of exposure in the periods in which the different agents were used, conclusions as to the efficacy of the different agents drawn from these data would be of questionable validity

Observations as to the prevalence of diphtheria carriers in two cities, Kingston and Ossining in which the incidence of clinical diphtheria has been extremely low for several years, were presented. These surveys showed a distinctly lower prevalence of both avirulent and virulent carriers than has been reported from carrier surveys in areas in which clinical diphtheria was more prevalent. Moreover, in Ossining a slight but significant increase in clinical diphtheria occurred immediately preceding the survey in that city, and while the prevalence of carriers of C diphtheriae was not increased,

TABLE 5.—RAPIDITY OF NATURAL IMMUNIZATION AS SHOWN BY SCHICK TEST SURVEY OF CHILDREN GIVING NO HISTORY OF ARTIFICIAL IMMUNIZATION KINGSTON, NEW YORK 1922 AND 1938

Age Group	1922 Survey			1938 Survey		
	Num- ber tested	Negative Num- ber	Per- centage	Num- ber tested	Negative Num- ber	Per- centage
0-4 years	60	22	36.7	15	0	0
5-9 years	284	78	30.7	198	35	17.7
10-14 years	165	66	33.9	266	118	44.4
15 years and over	22	10	45.5	109	58	53.2
Total	501	166	33.1	588	211	35.9

the prevalence of toxigenic organisms was higher than in Kingston where clinical infection continued at an extremely low level. These findings suggest a direct relationship between the prevalence of clinical infection and the prevalence of carriers of virulent organisms

In view of the present markedly decreased prevalence of carriers of toxigenic C diphtheriae in Kingston, the rapidity of natural immunization might be expected to be less than at a time when clinical infection occurred more frequently, and therefore in all probability the prevalence of carriers of virulent organisms was greater

The proportion of Schick-negative reactors in the age groups observed in the survey in Kingston in 1922 compared with the findings among persons not artificially immunized who were tested in the 1938 survey, while showing no difference in the proportion of Schick-negative individuals of all ages, did show a significantly lower proportion of negative reactors in children under 10 years of age in 1938

These findings lend support to the theory that with the decreasing incidence of clinical infection and the associated decrease in the prevalence of carriers of toxigenic C diphtheriae, natural immunization is materially reduced

The observations presented here have been made by a large group of health officers and practicing physicians. To all of these the authors are indebted, but especially to Dr. Chalmers J. Longstreet and his staff for the Schick test survey in Binghamton and to Dr. Edward A. Lane of the Westchester County Department of Health for the culturing in the Ossining carrier survey. The authors are also indebted to Mr. Morton Robins for the tabulation of the data and for the preparation of the tables and graphs.

The carrier surveys in Kingston and Ossining were part of a general study of administrative practice in diphtheria control sponsored and supported by the Committee on Administrative Practice of the American Public Health Association.

## Discussion

Dr Haven Emerson, *New York City*—This is the kind of exact analytic study on which modern administrative medicine is based

We are now warned that the less prevalent diphtheria is, the larger the percentage of persons in the community who will be found to be susceptible, and also that we cannot count on the activation of immunity by subclinical exposure or infection as we could when diphtheria was a fairly common annual occurrence in most urban communities

Not only must we readjust our immunization practice to the altered incidence of virulent carriers in the community, but we must be more precise in our knowledge of the development, height, duration, and rate of decline of immunity among children artificially and actively immunized

For this, titration studies must be relied upon rather than Schick testing Within the next two years the American Public Health Association should be in a position to express with reliability the relative worth of various procedures and materials for immunization based on the studies of Bunney and Volk in Saginaw County, Michigan, where toxin titration at six-month intervals for two years on each of 2,000 children has been carried out among those inoculated one or more times with fluid toxoid and alum precipitated toxoid

Dr Stebbins' observations and conclusions appear to be in close agreement with the provisional results of the studies carried out elsewhere in states and city populations in Ohio, Alabama, Virginia, and Maryland

It would appear from the last paragraph of Dr Stebbins' conclusions that we must now consider seriously the necessity of giving a single follow-up inoculation, on entrance to school, to children first immunized at or about 9 months of age, particularly where the child has grown up in a community in which diphtheria has been rare or absent during its preschool years

Questions which have not yet been answered by convincing and corroborated evidence are

- 1 What antigenic agent will give the earliest effective increase in homologous antitoxin at the age of greatest susceptibility, i.e., from 9 months to 5 years of age, and by what number and interval of dosage?

- 2 At what period after the first inoculation or the series of inoculations will the maximum antitoxic titer be found?

- 3 At what rate and to what degree after maximum level of antitoxin titer does this titer fall over a period of months or years until

it reaches too low a level to be effective and if it ever falls so far?

- 4 By what maternal and dose can the development of an active immunity be stimulated in a child who has not sustained its original artificial immunity as a result of its first dose or series of doses some years before?

Dr Archibald S Dean, *Buffalo, New York*—Dr Stebbins has presented much valuable data regarding diphtheria immunity I shall deal particularly with only two of his topics (1) the factor necessary to produce a significant decline below the trend in diphtheria mortality, and (2) the relative value of different immunizing agents A chart that I have prepared of diphtheria mortality rates in Buffalo from 1881 through 1938 shows that a significant decline below the downward trend occurred first in 1934 and continued thereafter Buffalo, with one-tenth the population of upstate New York, had from 1930 through 1933 one-third of all the diphtheria deaths or an average of 30 resident deaths per year From 1934 through 1938, however, Buffalo had only three resident diphtheria deaths per year, or a rate approximately equal to that of upstate New York The immunization of over 70 per cent of the children aged 5 to 9 years did not diminish the diphtheria mortality rate significantly The sudden change in diphtheria mortality in Buffalo was immediately preceded by the first house-to-house canvass of the city to secure the immunization of children under 5 years of age The canvass made in 1933 by 50 W.P.A. nurses assigned to the Visiting Nursing Association raised the percentage of children under 5 years of age who had received a diphtheria immunizing agent from an average of less than 28 per cent for the preceding four years to 39 per cent Visitation of homes of newly born babies subsequently maintained the percentage at approximately 38 Support is thus given to Dr Godfrey's statement in the *American Journal of Public Health* for March, 1932, that the immunization of 30 per cent or more of the under-5 age group, in addition to more than 50 per cent of children 5-9, has in several instances produced an immediate and striking decline in the diphtheria rate of the community as a whole

Dr Stebbins showed that in 1938 alum precipitated toxoid accounted for 75 per cent of the material distributed by the Division of Laboratories and Research of the New York State Department of Health for immunization against diphtheria in terms of complete treatments In Buffalo in 1938 only 51 per cent of material distributed was alum precipitated toxoid and

in the first quarter of 1939 only 26 per cent. There was also a decrease in the use of alum precipitated toxoid in upstate New York for the first quarter of 1939 to 65 per cent. The decline in the use of alum precipitated toxoid followed the publication of the January 1938, "Report of the Committee on Immunization Procedures of the American Academy of Pediatrics" that

One dose of alum precipitated toxoid does not immunize an individual as was originally thought."

Reports favorable to alum precipitated toxoid have been made since the publication of the conclusion of the American Academy of Pediatrics. Dean and Hyman in the *American Journal of Public Health* for October, 1938, concluded, as the result of experience in Chautauqua County, New York, that even in an area where diphtheria is not endemic a single dose of 1 cc of alum precipitated toxoid will give immunity to diphtheria as determined by the Schick test, to approximately 89 per cent of persons for at least twenty-eight months follow-

ing injection, and that from the public health point of view the continued use of one dose of alum precipitated toxoid seems justifiable. Volk and Bunney in the *American Journal of Public Health* for March, 1939, reported the results of studies carried out under a grant from the American Public Health Association and the United States Public Health Service. Titration of blood for diphtheria antitoxin was used in place of the Schick test to determine the comparative values of fluid and of alum precipitated toxoid. The study showed the antitoxin response of children to several diphtheria immunization procedures to be in increasing order of response as follows: one dose fluid toxoid, two doses of fluid toxoid at three-week intervals, one dose of alum precipitated toxoid, three doses of fluid toxoid at three-week intervals, and two doses of alum precipitated toxoid at three-week intervals. These findings corroborate those of Dr. Stebbins that fluid toxoid is significantly inferior to alum precipitated toxoid.

## HAVE YOU?

Have you done your bit to put through the profession's legislative program at Albany? asks the *New York Medical Week*. If not, you will have no one but yourself to blame if hostile legislation is enacted and desired measures fail to pass.

The legislative committees of the state and county medical societies are constantly on the job. They are heard respectfully at Albany—but their voice must be reinforced by the rank and file of the profession to carry complete authority.

When election day comes it is the individual voter who casts the ballot. The voice of the individuals who make up an organization therefore counts more heavily in controversial issues than the voice of the organization itself.

Take the pending chiropractic bill as an example. Organized medicine is opposed to the Peterson measure. The chiropractors' organization is backing it. If thousands of chiropractors write in support of this measure and only a dozen physicians bother to say anything against it, legislators conclude that the average medical man is indifferent to the outcome regardless of organized medicine's opposition.

There are three measures under consideration at the present time in which the medical profession is interested. The Peterson chiropractic bill virtually abolishes the present educational requirements for healing. It should be decisively crushed. The Desmond-Vincent radiology bill and the Page-Milmoe licensing bill strengthen educational requirements and should be passed.

In each case the desired result can be achieved if every physician does his part. Telephone telegraph or write to your legislative representatives about these measures now.

## TYPHOID CARRIER 101 YEARS OLD

A woman 101 years old has been found recently to be a typhoid carrier, reports *Westchester's Health*. This woman who was a resident of the county health district had typhoid fever eighty years ago before she came to this country.

The fact that she was a carrier was brought to light by the occurrence of 2 cases of typhoid fever in her family. One of her great-grandchildren had typhoid fever in 1938, and a second great-grandchild had the disease in 1939. It is believed that the carrier was responsible for these 2 cases, and although satisfactory information is lacking on this point, it is believed that she may have caused other illnesses among her relatives and her associates.

Each time a typhoid fever case is reported, every effort is made to find the source of infection and by means of the most intensive kind of public health detective work, the guilty individual is often discovered. In this instance suspicion was directed to the woman 101 years old because two young children in the same household with her who could not have had an opportunity to contract typhoid fever elsewhere, became ill with the disease. The carrier sometimes prepared meals for the children.

The discovery of this carrier adds one more to the list of known typhoid fever carriers in the Westchester County Health District. There are now twenty such carriers who are under constant supervision by the department of health and who are visited at least once every three months. These people must refrain from handling food or milk and must not even prepare food for members of their own households. They receive continuous instructions as to how to prevent giving the disease to others.

# TOXEMIA OF PREGNANCY

## Endocrine Basis with a Classification of Hypertension

JEFFERSON J. VORZIMER, M.D., EMANUEL M. RAPPAPORT, M.D., and  
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(From the Jewish Maternity Division of Beth Israel Hospital)

**I**N MAY, 1937, a study of 120 cases of toxemia of pregnancy was presented<sup>1</sup> that seemed to indicate that, in a large majority of cases, this condition develops in women who present detectable evidence of endocrine dysfunction. Clinically, the evidences noted were obesity, abnormal hair distribution, acromegaloid features, and abnormal stature. Many of these patients also had a low basal metabolic rate and a low plasma protein level. Furthermore, there was an unusually high incidence of male and primitive pelvic types with corresponding diminution of the number of true gynecoid pelvises.

Our conclusions as a result of these observations were (a) Toxemia of pregnancy is a disturbance evolving in women with a pre-existing constitutional abnormality of the endocrine glands. (b) If all women presenting endocrine stigmas were segregated, the great majority of cases of toxemia of pregnancy would arise in this selected group.

If the last conclusion were found to be true, we felt that it would add weight to our views as to the endocrine pathogenesis of this disease and would afford an excellent group for observation of its inception and course.

In an attempt to corroborate these conclusions, a special antepartum endocrine and toxemia clinic was established in January, 1937. The members of the regular obstetrical antepartum clinic were requested to refer the following patients to this special clinic: (a) women revealing detectable evidences of endocrine dysfunction (see criteria above) without evidence of toxemia of pregnancy, (b) patients having hypertension (with or without albuminuria) on admission to the

antepartum clinic, and those who develop it after admission, (c) those patients having a history of hypertension, kidney disease, or previous toxemia of pregnancy.

Our primary criterion for the diagnosis of toxemia of pregnancy was the development in the later months of pregnancy of abnormally high blood pressure in women who had no history or other evidence of preceding renal or hypertensive disease. Albuminuria and edema are present in the majority of these cases. In order to deal with a criterion of the disease that is universally accepted, cases in which hypertension is absent and the disorder is manifested solely by edema and albuminuria have been omitted.

Since the establishment of this clinic, 185 cases have been referred for special study. The results of the observations on these patients are presented under the following headings:

(1) Evidence to corroborate the findings of endocrine stigmas in patients developing toxemia of pregnancy.

(2) Value of the antepartum endocrine clinic.

### 1 Evidence to Corroborate the Findings of Endocrine Stigmas in Patients Developing Toxemia of Pregnancy

Of 185 patients referred to this special clinic, 148 had or subsequently developed toxemia of pregnancy. In no case was there evidence of renal insufficiency, concentration power of the kidneys being 1,020 or more. It will be noted that in all respects this series closely approximates the one previously presented,<sup>1</sup> both showing marked deviation from the normal. It is striking that the addition of the pres-

TABLE 1—COMPARISON OF PRESENT AND PREVIOUS TOXEMIA SERIES REPORTED AND COMBINED SERIES WITH THE NORMAL SERIES

	Present Toxemia Series (148 Cases)	Toxemia Series Reported (120 Cases)	Combined Series (268 Cases)	Normal Series (100 Cases)
Per cent endocrine stigmas (2 or more)	90	98	92.5	15
Average prepregnancy weight	147 lb	148 lb	147.5 lb	126.2 lb
Per cent abnormal hair distribution	61.7	74	67.8	9
Average weight/height ratio	2.39	2.5	2.44	2.08
Per cent enlarged features	54.5 (82 cases)	55	54.75	5 (350 cases)
Per cent true female pelvis	8.5 (70 cases)	7.2 (35 cases)	7.8 (105 cases)	46.1 <sup>a</sup>
Basal metabolism plus 10 or below	65.6	68	66.8	

ent series caused little change in the statistical comparisons. The evidence here presented adds further support to the theory that toxemia of pregnancy is a condition that develops in patients with a pre-existing constitutional abnormality of the endocrine glands.

## 2 Value of the Antepartum Endocrine Clinic

Eighty-five patients had been referred to the antepartum endocrine clinic because of the presence of endocrine stigmas only. In no case was there any evidence of toxemia of pregnancy. Each case was seen every one to two weeks, at which times blood pressure and urinary examinations were recorded. Of these 85 patients, 48 or 56.7 per cent developed signs of toxemia of pregnancy. The interval between their initial visit to our clinic and the development of toxemia varied from two days to five months, with an average of seven and three-tenths weeks.

The records of these 48 patients who developed toxemia under our observation are listed in Table 2.

## Comment

The first 34 cases presented in Table 2 developed, under observation, moderate to severe toxemia of pregnancy. Cases 1 and 30 were severe with convulsions. In each instance the past history was negative for renal or hypertensive disease. Nine cases had had previous toxemia of pregnancy. All of these patients had normal blood pressures until the later months of pregnancy when marked hypertension with diastolic blood pressure of 100 or more developed. In 24 cases, albuminuria and edema were associated

findings. In 9 cases, albuminuria was absent, and in only 1 was edema absent. As has been stated, it is our feeling that although albuminuria and edema are commonly found associated with hypertension these may be absent in some cases. Case 33, which is typical of this group, is presented in Fig. 1.

The last 14 cases presented in Table 2 developed mild but, what we feel to be, definite toxemia of pregnancy. The systolic and diastolic blood pressures in all these cases had risen above the normal limits of 140 mm Hg systolic and 90 mm Hg diastolic. Of greater importance is the actual rise in these cases such as that seen in Case 35, where the normal blood pressure was 102/70 and rose to 140/100 with the development of toxemia of pregnancy. In this case, following delivery, there was a significant return of the blood pressure to normal (105/65). Eight of these 14 cases developed associated albuminuria and edema, 3 albuminuria only, and 3 others, edema only. Case 44, as presented in Fig. 2, is typical of this group.

Only 37 patients with endocrine stigmas failed to develop hypertension, although several manifested marked disturbance of water metabolism. One hundred patients who had already developed signs of toxemia of pregnancy were referred to the special clinic. These cases are not discussed in detail, but upon examination of their records we found that, had our criteria for reference been more carefully adhered to, 80 of these would have been referred before the initiation of the disease. Many of these patients had registered late in pregnancy and had already developed hypertension, others should have been referred.



TABLE 2

	Age	Para	Gravida	Previous History	Normal Blood Pressure Level	Interval	Albuminuria	Edema	Toxemia Blood Pressure Level	Post partum Blood Pressure
1	29	I	II	Negative	90/60	2 weeks	+	+	190/112	140/86
2	38	III	V	Negative	130/80	3 weeks	+	+	150/100	120/72
3	27	0	I	Negative	112/60	8 weeks	+	+	150/106	130/70
4	29	0	II	Previous ectopic	120/80	11 weeks	+	+	150/100	126/86
5	23	0	I	Negative	138/78	3 weeks	0	+	160/100	124/80
6	18	0	I	Negative	128/80	5 weeks	0	+	180/100	120/88
7	22	I	II	Alb last preg	120/02	8 weeks	0	+	160/110	122/82
8	33	IV	V	Negative	126/74	5 weeks	+	+	154/106	126/78
9	23	I	III	Tox last preg	126/80	3 weeks	+	+	150/100	126/84
10	29	II	III	Tox last preg	90/54	11 weeks	+	+	150/112	106/72
11	26	I	II	Hyp last preg	118/84	13 weeks	+	+	150/104	130/88
12	28	0	I	Negative	130/78	6 days	0	+	158/100	112/72
13	30	II	III	Pelamp last preg	100/50	12 weeks	+	+	174/120	120/60
14	27	0	III	Pelamp 1st preg	132/80	11 weeks	+	+	155/100	130/80
15	23	0	I	Negative	130/76	2 weeks	+	+	160/100	110/68
16	22	0	I	Negative	128/84	1 week	+	+	170/102	114/80
17	20	0	I	Negative	110/70	2 weeks	0	+	160/120	124/86
18	32	I	II	Negative	112/76	10 days	+	+	158/110	130/100
19	28	0	I	Negative	128/82	3 weeks	+	+	170/180	134/84
20	33	III	V	Tox 12 yr ago	120/80	20 weeks	0	+	210/130	140/84
21	25	0	II	16 wk. ab 1 yr ago	110/78	3 weeks	0	+	140/110	138/100
22	21	0	I	Negative	140/80	2 days	0	+	158/100	126/72
23	28	I	II	Tox pr 6 yr ago	128/84	8 weeks	+	+	156/100	124/78
24	35	II	III	Negative	122/72	13 weeks	0	0	160/110	180/80
25	22	I	II	Negative	120/80	10 weeks	+	+	164/110	148/68
26	25	III	IV	Negative	108/74	1 day	+	+	178/116	120/88
27	32	I	II	Tox pr 2 yr ago	126/76	3 days	+	+	220/110	124/80
28	29	I	III	Negative	140/80	10 weeks	+	+	150/100	120/80
29	34	0	I	Negative	120/80	4 weeks	+	+	250/120	115/70
30	39	VI	VII	Tox pr 5 yr ago	132/80	14 weeks	+	+	170/110	130/86
31	30	I	II	Negative	130/80	1 week	0	+	160/110	120/70
32	21	0	I	Negative	120/70	2 weeks	+	+	170/130	136/92
33	25	0	I	Negative	128/78	8 weeks	+	+	214/106	84/60
34	21	0	I	Negative	110/60	10 weeks	+	+	150/100	140/88
35	20	0	I	Negative	102/70	2 weeks	+	0	140/100	105/65
36	23	0	II	1 early mis	120/75	12 weeks	+	+	148/100	140/94
37	30	0	I	Negative	110/72	4 weeks	+	+	140/95	106/70
38	20	0	I	Negative	132/80	9 weeks	+	0	150/98	125/80
39	35	I	V	4 spont. mis	124/76	3 weeks	+	0	154/92	136/84
40	35	II	III	Negative	126/74	5 weeks	+	+	142/84	140/82
41	22	0	I	Negative	132/70	2 weeks	+	+	170/86	120/85
42	23	0	I	Negative	120/80	11 weeks	+	+	160/84	128/72
43	30	II	III	Negative	132/84	10 weeks	+	+	162/90	120/80
44	21	0	I	Negative	116/68	16 weeks	0	+	150/95	124/82
45	18	0	I	Negative	100/70	3 weeks	0	+	140/96	104/64
46	27	II	III	Tox preg twice	120/80	15 weeks	0	+	148/84	130/80
47	31	II	V	Negative	130/80	22 weeks	+	+	164/94	120/80
48	21	I	II	Negative	140/70	10 weeks	+	+	146/92	122/78

We feel that the value of the antepartum endocrine clinic is well established by the above observations. As a result of this clinic we were afforded the opportunity of observing 48 patients before, during, and after the development of toxemia of pregnancy. This number will be greater in the future when the purposes of such a clinic are better understood. These observations indicate that if all women with endocrine stigmas are segregated and carefully watched, one would have a practical means for observing the inception of the vast majority of cases of toxemia of pregnancy. Of 268 cases of toxemia of pregnancy observed at the Jewish Maternity Hospital, only 20 cases revealed no clinical evidence of endocrine dysfunction and therefore were not observed in our special clinic. The fact that the great majority of cases of toxemia of pregnancy do arise in the selected group

of women presenting endocrine stigmas adds weight to our views as to the endocrine pathogenesis of this disease.

### Discussion and Presentation of Classification

We are all concerned with the ultimate determination of the exact nature of this disease. The evidence presented seems to indicate its basic cause, and reveals a valuable practical means in the form of the antepartum endocrine clinic for determining the precise nature of the endocrine disturbance that produces toxemia of pregnancy. Hormonal studies may now be done on selected cases limited to that group in which toxemia is most likely to occur. Such studies may eventually lead to the discovery of its exact cause.

To determine the nature of any disease we must study it in its purest form



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7	22	I	II	Alb last preg	120/62	8 weeks	0	+	160/110	122/82
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9	23	I	III	Tox last preg	126/80	3 weeks	+	+	150/100	128/84
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it is the practice at the Jewish Maternity Division of Beth Israel Hospital to terminate the pregnancy for the protection of the mother. The occurrence of pregnancy in patients having essential hypertension is not common, as is to be expected, because this condition is not common in the child-bearing period except in patients having had toxemia of pregnancy.

3 *Glomerulonephritis*—In the past when the terms kidney of pregnancy and nephritic toxemia were in general use, this complication was thought to be much more common than it actually is. Of late, as a result of the more accurate studies and understanding of renal function, we have come to the realization that the above terms are misleading and that glomerulonephritis, both in the acute and chronic form, is rarely a cause of hypertension in pregnancy. Only 4 cases of proved glomerulonephritis in approximately 5,000 have been observed at the Jewish Maternity Division of Beth Israel Hospital during the past five years. The differential diagnosis of this condition usually presents no difficulty. Evidence of renal insufficiency as revealed by deficient concentrating power, low urea clearance, nitrogen retention, the presence of a history of glomerulonephritis, and the presence of hematuria, all definitely aid in establishing a case as that of glomerulonephritis complicating pregnancy. Of prime importance is the realization that in true toxemia of pregnancy, impairment of renal function does not appear during pregnancy. It may appear but rarely, after many years, only as a result of the long standing hypertension which develops in many patients having had toxemia of pregnancy. The differentiation of uremic convulsions from those that occur in severe toxemia of pregnancy offers no difficulty. The prognosis and treatment of this condition differ greatly from that of toxemia of pregnancy. The prognosis is extremely bad, early emptying of the uterus and increased renal damage is the rule. As a result, the accepted therapy is termination of pregnancy as soon as this diagnosis is established.

4 *Pyelonephritis*—Peters<sup>4</sup> has described a cause of hypertension in pregnancy to which insufficient attention has been paid. Of 320 patients with hypertension in pregnancy observed by him, 41 had a definite history or evidences of pyelitis or pyelonephritis. This is not surprising in the light of the recent paper written by Weiss<sup>5</sup> in which he advised the addition of pyelonephritis to the classification of Bright's disease. Thus, as glomerulonephritis is occasionally the cause of hypertension in pregnancy, so pyelonephritis may similarly be the cause of rise in blood pressure, albuminuria, and edema in pregnancy. This clinical picture, however, is not to be considered as true toxemia of pregnancy any more than that caused by glomerulonephritis. The definition of toxemia of pregnancy states that it occurs in women in whom there is no history or other evidences of preceding renal or hypertensive disease. The prognosis and treatment of cases of pyelonephritis complicating pregnancy is exactly the same as in the cases of glomerulonephritis causing hypertension in pregnancy. These facts seem to indicate definitely that pyelonephritic hypertension in pregnancy is in no way similar to that of hypertension that occurs in cases of uncomplicated toxemia.

At the present time the only designation that we can assign to patients who develop hypertension with or without albuminuria and edema in pregnancy and in whom there is no history or evidence of the diseases that can cause hypertension and albuminuria outside of pregnancy is that of true toxemia of pregnancy. That such a condition exists is definitely accepted by all. If we are to study this condition in an effort to establish one of the many theories as to its cause, as a fact, we must deal with it in its purest form. We can accept cases of hypertension in pregnancy as true toxemia only if there is no complicating factor present that can cause such a condition in the absence of pregnancy. It may well be that at some later date pyelitis, pyelonephritis, and essential hypertension may be proved to be causes of a form of toxemia of preg-

the past six years. Although both pre-eclampsia and eclampsia differ in their clinical courses, it has been our feeling that, basically, they both occur in patients having manifestations of a disturbance of the endocrine glands. For these reasons, we include all cases of toxemia under one large heading—True Toxemia of Pregnancy. The clinical picture, that of the development in the later months of pregnancy of hypertension of over 140 mm Hg systolic and 90 mm Hg diastolic with or without albuminuria and edema, is well known. There is no impairment of renal function and in no case is there any history of renal or hypertensive disease. Despite the severity of the toxemia, surprisingly few patients complain of the textbook symptoms, such as spots before the eyes, headaches, and dizziness. This point should be kept in mind, for the absence of these symptoms should not mitigate against the diagnosis of toxemia of pregnancy. With proper antenatal care, the prognosis in those cases with mild hypertension, for the immediate future, is good. With limitation of fluids and salts, sedation, and care of body metabolism when indicated, almost all of these patients can be delivered at term, without incident, of a normal child. In those cases where the hypertension is marked, control by medical means may be difficult, and as a result, termination of the pregnancy must be resorted to in order to avoid definite injury to the mother, particularly injury to the cardiovascular system, and to prevent fetal death. There is a small group of cases of toxemia of pregnancy, commonly called eclampsia. The clinical course is well known, short in duration, and exactly like that of hypertensive encephalopathy. There may or may not be albuminuria or edema, but more commonly these are associated observations. There never is nitrogen retention except that due to excessive vomiting or that which appears in the agonal state. It must again be emphasized that even in the presence of convulsive seizures there is still no evidence of impairment of renal function. The future prognosis of cases

of toxemia of pregnancy has been ably investigated by Herrick and Tillman,<sup>1</sup> whose observations seem to indicate that a large majority of patients having this disease develop permanent hypertension no matter how mild the condition.

2 *Essential Hypertension*—The history or evidences of previous hypertension and the absence of a history or evidences of renal disease are the criteria for the diagnosis of essential hypertension in pregnancy. The hypertension is usually manifest early in pregnancy and is often merely a continuation of previously known hypertension. The occurrence of hypertension of this type is in no way related to the specific pregnancy in which it occurs, i.e., the pregnancy is not a precipitating factor as it is in true toxemia. The differential diagnosis between this condition and true toxemia of pregnancy is often difficult, as frequently the existence of hypertension is unknown to the patient, and the blood pressure may have been taken infrequently or not at all. Besides this factor there is no evidence of renal insufficiency in either state. These two conditions may be closely related, as they occur in individuals who seem to be prone, constitutionally, to the development of hypertension. There are adherents to the theory of endocrine dysfunction as the causative factor in both. From a research standpoint it seems wise to exclude all cases where there is doubt as to the existence of previous hypertensive disease from the class of true toxemia of pregnancy. From a therapeutic standpoint, however, the care is similar, and the rules governing cases of toxemia of pregnancy can be applied to cases of essential hypertension. If the blood pressure can be controlled at its original level and albuminuria and progressive eyeground changes do not appear, the patient may be able to go through an uneventful pregnancy. As to future prognosis, more investigation has to be done to prove that with such care no further damage is done to the cardiovascular system. With the appearance of albuminuria, increasing blood pressure, or eyeground changes, i.e., superimposed toxemia of pregnancy,

## Public Health News

### Antipneumococcus Serums of All Types for Positive Blood Culture Cases

**A**NTIPNEUMOCOCCUS serums have been available for types I, II, IV, V, VII, VIII, XIV. As an additional service, effective immediately, antipneumococcus serums, rabbit, will be supplied on request for the treatment of cases with positive blood cultures of the remaining types\*. These serums will be available for immediate distribution from the Central Laboratory in Albany, and the Branch Laboratory, 339 East 25th Street, New York City. Requests should be telephoned or telegraphed and should state the type and that the serum is for a case from which a positive blood culture has been obtained.

In connection with its study of pneumococci, the Division of Laboratories and Research will greatly appreciate receiving transplants of strains isolated from blood cultures from patients for whom serum of any type is furnished.

Further information relating to antipneumococcus serum may be obtained from custodians of supply stations, district state health officers, or the central laboratory and its branch.

\* Except for types XXVI and XXX which are considered closely related to or identical with types VI and XV, respectively.

### CHANGE OF ADDRESS

AFTER APRIL 15, 1940

**The Medical Society of the State of New York**

*WILL BE LOCATED AT*

**292 Madison Avenue, New York**

Telephone: MUrray Hill 3-9841

nancy These conditions are found in only the minority of cases of hypertension in pregnancy The large majority (over 80 per cent) of cases of hypertension in pregnancy develop in the absence of any history or evidences of hypertensive or renal disease Peters<sup>4</sup> states that 13 per cent of his cases had pyelitis or pyelonephritis What of the other 87 per cent, the majority or all of whom may have revealed no evidence of this or any other condition that might cause hypertension? Many men persist in basing their discussions of the nature of toxemia of pregnancy on cases that represent the minority of conditions found associated with hypertension in pregnancy, i.e., pyelitis, glomerulonephritis, and essential hypertension This will only hinder progress in the determination of the nature of true toxemia of pregnancy as defined in this paper If this is stopped, as it may be by the use of the above classification, there will no longer be found the glaring error of including cases in which the pathologic report reveals glomerulonephritis or renal infection in papers written on the nature of toxemia of pregnancy The determination of the exact nature of this condition is of extreme importance from a prophylactic and therapeutic standpoint In those cases where permanent damage already exists, as shown by evidence of renal or hypertensive disease, we know that little can be done to prevent the occurrence of hypertension in the later months of preg-

nancy On the other hand, if we determine the cause of true toxemia of pregnancy, we may be able to prevent the occurrence of the large majority of cases of hypertension in pregnancy It is hoped that the classification presented in this paper will at least create a clearer approach to the problems with which we are faced in the field of hypertension in pregnancy, particularly those dealing with true toxemia of pregnancy

### Conclusions

1 Evidence is presented to corroborate the observations of endocrine stigmas in patients developing toxemia of pregnancy

2 The value of the antepartum endocrine clinic is established This clinic affords a practical means for observing the inception and course of the vast majority of cases of toxemia of pregnancy and is an excellent source of material for clinical and laboratory investigation of the nature of toxemia of pregnancy

3 A classification of hypertension in pregnancy is presented which, if more universally used, will create a clearer and more definite understanding among the workers in this field as to what is meant by the term toxemia of pregnancy

### References

- 1 Vorzimer Fishberg Langrock and Rappaport  
Am. J. Obst. & Gynec 33 801 (1937)
- 2 Rappaport and Seadron J.A.M.A. 112 2492 (1930)
- 3 Herrick and Tillman Arch. Int. Med. 55 043 (1935)
- 4 Peters J P J.A.M.A. 110 329 (1938)
- 5 Weiss S Tr. A. Am. Physicians 53 60 (1938)

### THE DOCTORS' ORCHESTRAL SOCIETY OF NEW YORK

The Doctors' Orchestral Society of New York will hold its second annual concert on Friday evening, May 10, 1940, at Town Hall, New York City This event will round out the week of medical activities of the annual convention of the State of New York Medical Society to be held at the Waldorf-Astoria This promises to be an outstanding affair judging from the program of the evening The orchestra was organized a few years ago and consists of physicians and dentists, of New York City and its surroundings, active in music as a hobby It has stimulated the return to musical activity of a number of colleagues who, through lack of opportunity, had abandoned the instruments that they had enjoyed playing in music groups in high school and college The orchestra has grown to its present status of a complete symphonic outfit under the conductorship of Mr

Ignatz Waghalter, former conductor of the Charlottenburg Opera House in Berlin The musical press comments on its première last spring at the Town Hall were most favorable, and the orchestra, surprising its audience, acquitted itself with unexpected success. It is now considered to be one of the best amateur music groups in the City of New York The program will include symphonic works by the Goldmark, Wagner, and Tschailowsky The soloist of the evening will be Dr Leopold Glusko, who will sing the principal tenor arias from Wagner's operas, Lohengrin and Die Meistersinger, and will be accompanied by the orchestra singer, and will be accompanied by the orchestra Part of the proceeds will be donated to the Physicians' Home. A sell-out is almost assured Those interested in attending this unusual event should apply for tickets immediately to Dr W Spielberg, 235 East 22nd Street, New York City

Wagner), provides that exposure to hazards of harmful dust for sixty-day period after September 1, 1935, shall be presumed to be an injurious exposure for purposes of workmen's compensation.

We are now informed that the Regents considered the Mahoney physiotherapy bill at their regular meeting on March 15 and voted to disapprove it. Unfortunately, their action was not communicated to the Legislature until after the Senate had voted and our special bulletin mailed. The companion bill, as we had reported earlier, was killed in the Assembly committee and automatically that action applied to the Senate bill when it reached the Assembly.

Some may have read an editorial in the *New York Times* entitled "Back-Door Health Insurance," referring to a bill introduced by Assemblyman Goldberg which provides that cash benefits should be paid to a person registered for employment but unemployed because of illness. It requires some familiarity with the European health

insurance plans or with the health insurance bills introduced in the Legislature this year to understand the force of the argument in the editorial. Our unemployment insurance scheme provides that cash payments shall be made to unemployed persons, but when Mr. Goldberg specified that if unemployment was due to sickness, the benefits should be paid as well, he was incorporating one of the provisions of those health insurance schemes that provide for the payment of cash benefits. The bill is now with the Governor awaiting his action.

A complete report of the final status of each bill that we followed during the session was prepared and was mailed on April 8.

JOHN L. BAUER

LEO F. SIMPSON

WALTER W. MOTT

*Committee on Legislation*

JOSEPH S. LAWRENCE

*Executive Officer*

## "ALCOHOLICS ANONYMOUS"

That is the name of an organization that had its start in New York City five years ago and now has members in most of the large cities, according to an article in the *Illinois Medical Journal*. It is "of great interest to the medical profession," for "every physician, has been confronted with the problems of the incurable alcoholic." The new organization is composed of former alcoholics, who know how to approach the drunkard.

The chronic alcoholic resents the efforts made by his relatives and friends to help him. He feels they do not understand him or his problem. But when he talks to people who themselves have been drunkards he realizes that these people do understand, for they have had the same personal experiences.

Many of the members have fine intellects and have held positions of great responsibility which they are regaining.

The growth of Alcoholics Anonymous and its influence on the fraternity of chronic drinkers have been achieved almost entirely through per-

sonal contact and through the family physician.

When a drinker recognizes the failure of his own systems for stopping drink and admits his need for help, then and then only can he be helped by the fellowship of other members of the group.

When he is ready the new member goes out with other members in occasional "missionary" work. Each member feels in duty bound to go to the aid of another unfortunate.

No sacrifice is too great. No pay is accepted or wanted. In trying to save others the alcoholic saves himself.

The principles of Alcoholics Anonymous do not conflict in any way with religious sects or creeds. The organization is not in any sense a "racket."

There are no officers, no dues, and no costs whatever. The only requirements for admission to Alcoholics Anonymous are a sincere desire to get rid of the alcoholic habit and willingness to help others so addicted.

## TO REPORT DEAF CHILDREN

Every child under six years of age who is totally deaf or whose hearing is impaired must be reported to the State Commissioner of Health, we are reminded by *Health News*. Reports are to be sent to Division of Maternity, Infancy, and Child Hygiene, attention Dr. Marion F. Loew.

This reminder is occasioned by the fact that the department is being notified of comparatively few such cases and that reports are sent through a variety of channels. In view of the apparent confusion as to what cases are reportable and to whom, it is believed advisable to review the pertinent provisions of the Public Health Law.

Section 320 a requires every attending or consulting physician, nurse, parent, or guardian,

having charge of any minor under six years of age who is totally deaf or whose hearing is impaired, to report at once the name, age, and residence of the child to the State Commissioner of Health and to furnish such additional information as the commissioner shall require. Since homes for the deaf are reducing the age limit for admission from six to three years, it is more urgent than ever that such children be discovered and reported at as early an age as possible. The Division of Maternity, Infancy, and Child Hygiene has certain funds available for the otologic examination of those children who, because of inability to pay, have been unable to procure such an examination.



# Legislative News

Bulletin No 12

(April 2, 1940)

**T**HE Legislature finally adjourned at 12 30 Sunday morning after having stopped the clocks at two o'clock Saturday afternoon.

Except for our disappointment in being unable to move the radiology bill out of committee, our fortune with the Legislature has been very satisfactory. Three of the bills that we favored have already been signed by the Governor and one which we followed, but took no definite position upon, has been vetoed. The following twenty-one bills were passed by both houses and await the Governor's action.

Senate Int 18—Warner (Assembly Int 77—Hollowell), makes provision prohibiting alcoholic beverage sales to children apply to children under 18 years of age instead of 16.

Senate Int 97—Mrs Graves (Assembly Int 79—Allen), prohibits generally the manufacture, sale, or serving of adulterated or misbranded foods.

Senate Int 115—Wicks, creates board in the State Education Department for licensing and regulating practice of optical dispensing, and appropriates \$10,000.

Senate Int 134—Warner (Assembly Int 152—Milmo), regulates sale, distribution, and possession of fireworks by local authorities, permits being restricted to public display, effective August 1, 1940.

Senate Int 199—Desmond, creates a commission to study problem of trichinosis and other diseases contracted from infected meat, cooperating with State Health and Agriculture and Markets departments, and appropriating \$5,000.

Senate Int. 310—Hastings (Assembly Int 322—C D Williams), requires every physician, nurse, parent, or guardian to report to State Health Commissioner, age and residence of minor under six years who is totally deaf or whose hearing is impaired, in New York City, for adequate care and treatment by appropriate welfare or other agency.

Senate Int 927—Page (Assembly Int 1399—Milmo), provides that applicants for medical licenses who meet requirements as to preliminary and professional education with evidence of successful practice or professional experience, and with evidence satisfactory to State Education Commissioner that they have been duly licensed in another state or territory of U S, may receive licenses without further examination.

Senate Int 1685—Mahoney (Assembly Int 2153—Todd), permits practice of medicine in a hospital, by physicians and interns on hospital staffs, who have completed not less than four satisfactory courses of at least eight months each in medical schools in this country or Canada, or in a foreign country, or have received a doctor's degree from such schools having a standard not lower than that prescribed for medical schools in this state, also relates to medical students performing clinical clerkship.

Senate Int. 1697—Desmond, prohibits sale, as well as the dispensing, of a drug for treating venereal diseases, except on prescription of a physician, also prohibits indirect reference to

such diseases, in advertisements, by use of words or phrases intended to convey idea that such diseases are referred to.

Senate Int 1799—Hampton (Assembly Int. 2175—Piper), authorizes State Insurance Superintendent to issue permit for organization and license to membership corporations under supervision of New York State Public High School Athletic Association for furnishing medical and dental expense indemnity to students injured in or during preparation for athletic games, sports or contests, and any other accidents which Superintendent thinks should be included.

Senate Int 1833—Hastings (Assembly Int 2345—C D Williams), continues temporary state commission for improving conditions for care of hard of hearing and deaf children until March 15, 1941.

Assembly Int. 150—Goldstein, provides that injured person or legal representative, in case of death resulting from injuries, shall be permitted to examine hospital records relative to treatment and care.

Assembly Int. 195—Vincent, makes provision relating to offenses not bailable by inferior courts apply to any violation of Public Health Law relating to narcotic drugs, which is defined as a misdemeanor under Section 1751-a, Penal Law.

Assembly Int 878—Todd, provides that after July 1, 1941, instead of 1940, it shall be unlawful to practice nursing without being duly licensed and registered, and relates to residence and citizenship requirements for practical nurses.

Assembly Int. 1420—Mailier (Senate Int 1168—Mahoney), makes internship of not less than twelve months in a hospital in this country or Canada a condition prerequisite to receiving license to practice medicine.

Assembly Int 1661—Armstrong, Workmen's Compensation Law, physicians' progress reports.

Assembly Int 1806—Wagner (Senate Int 1451—Mahoney), provides that determination as to medical care necessary for any person applying to public welfare officials shall be made with the advice of a physician whose opinion is also required for transferring patients to another hospital.

Assembly Int 1856—Ehrlich (Senate Int 1520—Swartz), requires temporary state commission appointed to investigate health of inhabitants of the state to investigate subject of care and hospitalization of persons suffering from tuberculosis and of state financial aid for hospitals and means to provide equality of opportunity for scientific care and treatment of tuberculosis, as well as for its prevention.

Assembly Int. 2022—Armstrong, repeals the provision that prohibits sale of hypodermic syringes and needles without written order of a licensed physician or veterinarian.

Assembly Int 2140—Mailier, extends to April 15, 1941, time when State Commission to Formulate a Long Range Health Program may make its final report, and appropriates \$45,000.

Assembly Int. 2281—Wilson (Senate Int 1702—Schwartzwald, Assembly Int 2171—

Buffalo newspaper reported that Sir William Osler, while regius professor of medicine at Oxford University, told Dr William H Hodge, of Niagara Falls, that he knew of no physician whom he considered superior to Dr Buswell "either in ability or sound judgment"

### Kings County

The first Annual Spring Festival of the Committee on Social Activities of the Medical Society of the County of Kings and the Academy of Medicine of Brooklyn will be held on the week of May 13 to 18, consisting of a Hobby Show and Sports Tournaments, and ending with the fourth concert of the Doctors Musical Society of Brooklyn, Saturday, May 18, 8 45 P. M., at the Brooklyn Academy of Music (Tickets for concert are \$0.50, \$1.00, and \$1.50 and the proceeds go to Kings County Medical Loan and Relief Fund)

### Livingston County

Dr Nathaniel Jones, of Rochester was the guest speaker at a meeting of the Livingston County Medical Society at Sonyea on Feb 20 His subject was "Fever Therapy"

### Monroe County

"Facts About Your Heart" was the subject of free public lectures at the Rochester Academy of Medicine Auditorium, on February 25, by Drs Morris E Missal, John J Finigan, and Clarence P Thomas

Exhibits and motion pictures also were on the program, sponsored by the Academy the Medical Society of the County of Monroe and the University of Rochester School of Medicine

### Nassau County

Advances made in the past seven years were discussed by Dr Robert T Frank, of Columbia University and Mount Sinai Hospital who spoke on "Endocrinology in the Female" at the meeting of the Nassau County Medical Society at the Cathedral House, Garden City, on February 27

Dr Frank spoke before the society seven years ago on the same topic and returned to tell of the advances made since that time.

### New York County

A scientific session of the Committee on Cardiac Clinics of the New York Heart Association was held on February 27 at the New York Academy of Medicine The meeting was devoted to the presentation of original investigations that have been conducted in the affiliated cardiac clinics of the association Dr Edwin P Maynard, Jr., presided

The East Side Clinical Society met at the Beth Israel Hospital Auditorium on March 12 and listened to the following program (1) An Unusual Reaction to Sulfapyridine by Dr A Allen Goldbloom (2) A Case of Celiac Disease," by Dr Samuel Gross, (3) Primary Torsion of Omentum," by Dr Edward K. Barsky (4) "Erythroblastosis Foetalis in Identical Twins" by Dr Lawrence M Shapiro (5) "Bronchopleural Fistula" by Dr Morris Beyer There was a general discussion

The New York Surgical Society met at the Academy of Medicine on March 13 Topic and speaker "Surgical Treatment of Hyperten-

sion" Dr Alfred W Adson, Rochester, Minn

The Eastern Medical Society met on March 13 at the Squibb Auditorium The program was (I) Executive Session (II) Scientific Session (1) Case Report—Profound Anemia Due to Ulcerated Internal Hemorrhoids, by Dr Joseph F Saphir (III) Addresses (1) "Clinical, Bacteriologic, and Therapeutic Interpretations of Arthritis," by Dr Currier McEwen, dean of New York University College of Medicine, (2) "Roentgenologic Diagnosis of Arthritis," by Dr Maurice Pomeranz, roentgenologist Hospital for Joint Diseases (IV) Discussion Drs Ralph H Boots, Russell L Cecil, Edgar D Oppenheimer, David Sashin

These papers were presented before the American-Hungarian Medical Association at Squibb Hall on March 11 (1) "The Climacteric and Its Management" (a) In the Female, by Dr Emery Wahl, (b) In the Male, by Dr Paul Hoch, discussed by Dr E Gladstone (2) "Acute Abdomen in Childhood" (a) From the Medical Aspect by Dr Camille Keresturi, (b) From the Surgical Aspect, by Dr Imre Braun, discussed by Drs Victor G Hentz and M Maher-Schoenberger

An address was given before the Society of Medical Jurisprudence on March 11, at the New York Academy of Medicine, on "An American Health Program" by Dr Nathan B Van Etten president-elect, American Medical Association

Dr Charles Gordon Heyd spoke at the Manhattan General Hospital on March 11 on "Surgical Indications of Duodenal and Gastric Ulcers"

The program of the Rudolf Virchow Medical Society of the City of New York, at the New York Academy of Medicine on March 4 included these features "New Investigations on the Digitalis—and the Strophanthum—Problem and Their Practical Application" (in German), by Dr Ernst P Pick, "Angina Pectoris—Medical and Surgical Treatment Based on the Innervation of the Heart" (in German), by Dr Hyman R Miller

The dinner of the Medico-Military Symposium, planned for March 5 at Town Hall Club was held, instead at the more convenient date of Saturday, April 6

Three organizations held a joint annual meeting, March 5, at Hotel Pennsylvania That of the Tuberculosis Sanitarium Conference of Metropolitan New York opened at 9 30 A. M., with Dr William J Ryan chairman, presiding, that of the New York Tuberculosis and Health Association, at a 12 30 P. M. luncheon meeting with Dr I Ogden Woodruff, president presiding, that of the New York Heart Association at 3 00 P. M., with Dr Ernst P Boas, chairman, presiding

These scientific addresses were presented before the Harlem Medical Association on March 6 at Squibb Hall (1) "Treatment of Disease" by Dr George J Heuer, professor of surgery, Cornell Medical School, and surgeon-in-chief New York Hospital Discussed by Dr A A Berg consulting surgeon, Mount Sinai Hospital and by Dr Henry Wisdom Cave, attending surgeon, Roosevelt Hospital (2) "The Medical

# Medical News

## Reunion—Class of 1890, Bellevue Hospital Medical College

FIFTEEN members of the class of 1890, Bellevue Hospital Medical College, met in New York City on March 9 to celebrate the fiftieth anniversary of their graduation, which was also the fiftieth anniversary of their beginning the practice of medicine. Fifty years ago there were no laws requiring state medical examinations additional to finishing the prescribed course of study at medical school.

This was the twenty-fifth consecutive class reunion, which has been held as an anniversary dinner meeting each year in the same room of the same hotel—the Yacht Room of the Hotel Astor. The class originally numbered 144, of whom thirty-five are living. All are over seventy years and with a few exceptions are still practicing their profession. These men have seen develop, in their lifetime, the whole of the science of bacteriology, the theory of the control of communicable diseases, and the art of antiseptis. They have witnessed the development of the x-ray and radium treatment, the electrocardiograph, and the discovery of vitamins and blood chemistry. Pasteur, Lister, Koch, and Roentgen, who revolutionized medicine, were their contemporaries.

As invited guests on this occasion were present two physicians who were members of the faculty of the medical school in 1890 as instructors in

the Department of Anatomy. Dr. John F. Erdmann and Dr. Henry M. Silver, of New York City. Other invited guests present included Dr. Currier McEwen, dean of New York University College of Medicine, which has absorbed the old Bellevue Hospital Medical College, Miss Gloria Hollister, Dr. Edward R. Cunneiff, Dr. Hugh Cox, and Mr. Dwight Anderson.

The presiding officer was Dr. Nathan B. Van Etten, of New York City, who is president-elect of the American Medical Association, taking office as the president at the next annual meeting in New York in June. Other members of the class present at the reunion were Charles W. Banks, East Orange, New Jersey, Oswald O. Cooper, Hinton, West Virginia, Joseph M. Douthett, Pittsburgh, Pennsylvania, George W. Gaines, Tallulah, Louisiana, Joseph F. Gillespie, Greencastle, Indiana, Clarence S. Kurtz, Malvern, Pennsylvania, Charles A. Luce, Amityville, New York, Frank H. Munkwitz, Milwaukee, Wisconsin, Erasmus A. Pond, Brooklyn, New York, John H. Pratt, Manchester, New York, Claudius J. Riddick, Suffolk, Virginia, William H. Steers, Brooklyn, New York, Samuel G. Tracy, New York City, John E. Virden, New York City, Frank L. Wakefield, Heyworth, Illinois.

## County News

### Albany County

"The Management of Sterility by the General Practitioner" was the title of the talk given at the March meeting of the Medical Society of the County of Albany, by Dr. Samuel R. Meaker, F.A.C.S., M.R.C.S., F.C.O.G. (Eng.), professor of Gynecology at Boston University School of Medicine.

On February 28 the Society listened to an address by Dr. Burrill B. Crohn, associate in medicine, Mt. Sinai Hospital, New York, associate in medicine, Columbia University, New York (College of Physicians and Surgeons) former president, American Gastro-Enterological Association, on "Peptic Ulcer."

### Broome County

Dr. Morris Fishbein, editor of the *J.A.M.A.*, dedicated the new \$500,000 addition to the Binghamton City Hospital on April 4.

The Broome County Medical Society honored him at a reception at 5:00 P.M. the same afternoon.

At 6:30 the staff and board of managers of the city hospital entertained Dr. Fishbein with a dinner at the hospital.

He also delivered a public lecture in Central High School at 8:00 P.M.

### Erie County

On Saturday, April 20, the Sixth Annual Clinical Day of the Alumni Association, School of Medicine, University of Buffalo, to which all

physicians are cordially invited, will be held at the Statler Hotel, Buffalo.

The speakers and subjects are as follow: Dr. Newton D. Smith, Mayo Clinic—"The General Practitioner's Anorectal Problems"; Dr. James G. Carr, Northwestern University—"Obscure Fever"; Dr. Albert M. Snell, Mayo Clinic—"Some Problems Presented by the Jaundiced Patient"; Dr. Henry M. Thomas, Jr., Johns Hopkins—"Hypertension. The Modern Conception of Its Causes and the Results of Medical and Surgical Treatment"; Dr. Temple Fay, Temple University—"Observations on Human Refrigeration."

The Buffalo Academy of Medicine, Section of Surgery, listened to an address on March 6 on "Indications and Types of Surgical Procedures in Patients Suffering from Duodenal Ulcers," by Dr. Roscoe R. Graham, of Toronto. Discussion was opened by Dr. Donald Guthrie, Sayre, Pa., Dr. Grover Penberthy, Detroit, Dr. Marshall Clinton, Buffalo, Dr. Herbert A. Smith, Buffalo.

The Section of Medicine, on March 13, held a symposium on "Pneumonia in Children."

The Women Physicians' League, of Buffalo, held a joint dinner meeting with the Counselors and Women Dentists at The Park Lane on February 29.

Dr. Henry Clark Buswell, of Buffalo, who died of pneumonia on March 4 at the age of seventy-eight at the Strong Memorial Hospital in Rochester, had practiced medicine fifty-two years. A

Dr Irving J Sands, neurologist, Neurological Institute, Jewish and Coney Island hospitals, March 15—"Types of Obesity and Their Treatment," by Dr John McDowell McKinney, neurologist, St. Luke's Hospital and Neurological Institute.

The appointment of an advisory medical committee of seven, representing the Medical Society of the County of Queens and the Queensboro Tuberculosis and Health Association, to guide the latter in matters of medical policy, has been announced by Dr James R. Reuling, Jr., president of the Queensboro association.

Members of the committee are Dr John J Sheehy, Hollis, Dr Lawrence Waterhouse, Jamaica, and Dr Jacob Werne, Jamaica, chairmen respectively of the medical economics, public relations, and public health committees of the Medical Society, Dr Harry H Epstein, Jamaica, and Dr Abraham Braunstein, Long Island City, clinicians of the association, Dr Herbert R. Edwards, of Jackson Heights, director of the Bureau of Tuberculosis of the New York City Department of Health and member of the association's council, and Dr Reuling, Bayside, member ex-officio, and chief of medical division No 4 of Queens General Hospital.

#### St. Lawrence County

Members of the Ogdensburg Medical Society met at St. John's Hospital on March 6 to discuss the proposed medical insurance plan. Officials of the plan outlined details. The plan has been taken under advisement by the St. Lawrence County Medical Society and formal action is planned later.

#### Schenectady County

Dr Louis C Kress, director of the Division of Cancer Control of the New York State Department of Health, spoke before the Schenectady County Medical Society in the auditorium of Ellis Hospital on March 5 on "Organization, Operation, and Personal Experiences Concerning a Tumor Clinic." Dr Kress also explained to the society the new law forcing doctors to report every cancer case to health authorities. It is hoped, he said, by this means to compile significant statistics which will be of help in the future.

#### Seneca County

Dr Carroll B Bacon, one of the oldest practicing physicians in Seneca County, dean of the Waterloo Medical Board and member of staff of the Waterloo Memorial Hospital, died on February 24 at his residence, following an illness of several weeks. He was seventy-one years old and had practiced medicine since 1896.

He had served continuously as a health officer of Waterloo village since 1900. He was elected coroner in 1916, being re-elected for consecutive terms since that time. He had served as physician to the town and county poor and for several years was jail physician.

He was treasurer of the Seneca County Medical Society in 1903, continuing as such until its reorganization in 1906, when he was advanced to secretary. In 1915 he was elected its president.

#### Tioga County

"The Science and Art of Obstetrics" was the program subject for a meeting of the Tioga

County Medical Society, at Jenkins Inn, Waverly, on March 5.

"Eclampsia," a silent motion picture film in three reels, prepared by Dr Joseph B DeLee, chief of staff of the Lying-In Hospital in Chicago was shown.

Dr Eugene E Bauer, veteran health officer of the village and town of Oswego and a practicing physician and surgeon there for forty-two years, died suddenly of a heart attack at his home, on Sunday morning, February 25. He would have been seventy on March 1.

#### Tompkins County

At the March meeting of the Tompkins County Medical Society, held March 11 at Cornell University, over one hundred were present to hear Dr Norman Plummer, of New York, talk on the newer developments of treatment of pneumonia.

Dr Plummer presented a moving picture of pneumonia cases from their entrance into the hospital to their discharge, with the various types of bed and laboratory technic. After the movie, he spoke of the newer types of treatment in a most instructive and interesting manner.

Dr Harry A Britton, of Ithaca, was elected to membership in the Society.

#### Westchester County

The topic of the meeting of the Medical Society of the County of Westchester on March 19 was "The Surgical Treatment of Coronary Disease" (illustrated with colored motion pictures and lantern slides)—(1) Operative Treatment, by Dr Samuel A Thompson, New York City, (2) Medical Management, by Dr Milton J Raisbeck, New York City.

The New Rochelle Medical Society held a regular meeting on February 12. Mr H D Margulies, a member of the New York Bar, spoke on "Workmen's Compensation."

The Yonkers Academy of Medicine held a stated meeting on February 21 at the Hudson River Country Club.

The guest speaker was Dr Albert H Aldridge, of New York City, whose topic was "Sterility Its Diagnosis and Treatment."

At a regular meeting of the Mount Vernon Medical Society on February 8, Dr William A Zavod, of Mount Vernon, director of the Chest Clinic at Mount Vernon and New Rochelle hospitals, spoke on "Hemoptysis, Differential Diagnosis and Treatment."

At a regular meeting of the White Plains Medical Society on January 30, Dr G H V Hunter was elected president for the coming year. Dr James R Montgomery was elected vice-president, and Dr Harry Klapper was re-elected secretary and treasurer. Following the business meeting, Mr W H Robinson presented an illustrated lecture on "The Great Pyramid of Gizeh."

A meeting of the Westchester Society for Gastroenterology was held at Grasslands Hospital, Wednesday evening March 27. Dr Edward C Benedict of the Massachusetts General Hospital, Boston, spoke on "Gastroscopy and Anterior Peritonoscopy."

Department of the New York World's Fair 1939," by Dr J P Hoguet, director (3) "Medullary and Cortical Tumors of the Adrenal Gland," with case studies and lantern slide demonstration, by Dr Joseph T Travers, director of Department of X-Ray, Jewish Memorial Hospital Discussed by Dr H Wesson

The program of the New York Endocrinological Society at the New York Academy of Medicine on February 28 was as follows Case Presentations (1) "Addison's Disease in the Aged," by Drs Bernard Seligman and H Mandelbaum (2) "Clinical Application of Calcium Metabolism" (review with lantern slides), by Dr Isaac Apperman, United States Marine Hospital (3) "The Roentgenogram in Some Endocrine Disturbances" by Dr Maurice M Pomeranz

A symposium on neurosurgery was presented at the meeting of the New York Surgical Society at the New York Academy of Medicine on February 28 The papers were (1) "The Treatment of Subdural Hematoma on the Basis of Experience with 130 Cases," by Dr E Jefferson Browder, (2) "End Results of Frontal Lobectomy in the Treatment of Gliomas of the Brain" by Dr Byron Stookey, and Drs John Scarff and Michael Teitelbaum, by invitation, (3) "Surgery of the Sympathetic Nervous System for Vascular Spasm in the Upper Extremities," by Dr Beverly C Smith Cases illustrating papers were shown by Drs Beverly C Smith and Byron Stookey

The New York Society for Medical History is the latest newcomer to join the organizations of the metropolis, its initial meeting having been held February 16 in the Erdmann Auditorium of the Post-Graduate Hospital The secretary is Dr Edward F Hartung, the society being a constituent of the American Association of the History of Medicine

The Comitia Minora desires the members to know that a panel is being formed of physicians willing to examine domestics at a substandard fee Physicians willing to undertake this work will please communicate with the secretary, where all necessary data are available

The Committee on Infant Mortality of the Medical Society of the County of New York earnestly requests the cooperation of all physicians caring for obstetrical cases in procuring autopsies on all stillbirths and neonatal deaths The work of this committee will be greatly simplified and the statistics collected will be of scientific value only if a large percentage of these cases is subjected to postmortem examination — *Locke L Mackenzie, M D, Chairman*

The American Physicians' Art Association will hold its third annual exhibition, June 10-15, in Hotel Belmont Plaza, Manhattan Dr Abr L Wolbarst, 114 East 61st Street, is chairman of the committee on arrangements

The recently organized New York Society of Oral Diagnoses, formed of physicians and dentists, met on February 27 at Hotel Pennsylvania Preceded by a dinner, the program included an address by S Knops on "The Tongue in Oral Diagnosis"

The Contin Society, the honorary scholastic society of the New York Medical College and

Flower-Fifth Avenue hospitals, held its annual induction dinner on March 1 at the Hotel Empire in New York City

### Oneida County

More than two hundred physicians of Oneida County have signed agreements to participate in Medical and Surgical Care, Inc., which was licensed by the state on March 1 It will serve twelve counties in central and northern New York

A kidney inflammation, believed to be aggravated by the exertion of getting his car out of a snowbank while enroute to Miami for a vacation, resulted in the death of Dr George M Fisher, seventy-one, of Utica, prominent skin specialist and public health leader, on February 25

Dr Fisher was a past-president of the State Medical Society and had been a leader in movements to combat cancer and tuberculosis

He was chairman of the Oneida County Medical Society's committee on cancer control which a year ago launched an extensive educational campaign For the last nine years he had headed the Oneida County Council on Tuberculosis and Public Health

Dr Fisher once was president of the Oneida County Medical Society and long had been chairman of its board of censors He became president of the State Medical Society in 1926 and inaugurated the public relations policy that is followed today

### Onondaga County

Despite the fact that there is much room for improvement in natal care, mothers in the United States have the lowest birth mortality rate in the world, Dr Edward Waters of Margaret Hague Hospital, Jersey City, declared in a talk at the first joint meeting of the Syracuse Obstetrical Society and the Onondaga County Medical Society at the Syracuse University College of Medicine on March 5

Dr Waters made two other addresses during the day He spoke in the afternoon at the college to the obstetrical society and then was honor guest of the societies at a dinner in the University Club

"Lower mortality," Dr Waters told the physicians, "depends to a great extent upon more conservative operative obstetrics"

Upon the women themselves, he said, there also rests a responsibility, and that is "for each to be certain that she puts herself under competent medical supervision, in order to minimize the resulting complications of delivery, with their toll of trauma, infection, and death"

### Queens County

Two papers on pneumonia featured the meeting of the Medical Society of the County of Queens on February 27 They were "The Appropriate Remedies in the Treatment of the Pneumonia," by Dr Jesse G M Bullowa, physician, Mt Sinai Harlem, and Willard Parker hospitals, "New York City's Pneumonia Mortality and the Significance of Chemotherapy for Pneumonia Control," by Dr Wheelan D Sutliff, assistant director, Pneumonia Control Division, Department of Health

These Friday afternoon talks were given March 1—"Cerebral Vascular Disorders," by

# Medicolegal

LORENZ J. BROSNAN, ESQ

Counsel, Medical Society of the State of New York

## Negligence—Injuries to Nursing Infant

**A**N UNUSUAL case was tried a short time ago in the Supreme Court in this State and disposed of with a decision which should be of interest to physicians.\*

The action was brought on behalf of an infant plaintiff to recover damages for alleged personal injuries sustained by the infant and for expenses incurred by his father as a result of an alleged poisoning through the ingestion of lead during the early months of his life. The child was breast fed, and ten days following birth, when the mother and infant returned home, the mother found that her breasts were sore and purchased through her husband a pair of metallic nipple shields, which were marketed by the defendant. The shields were manufactured for the defendant by the C-Fruit Jar Company. They were put up by it in unsealed boxes with a circular descriptive of the product that referred to its history and development, asserted as going back to a paper by one, Dr Wansbrough, published in the *Lancet* as early as 1842. The directions included in the circular stated in part as follows:

"For the prevention and cure of sore nipples these shields should be applied as soon after delivery as possible, and in using them the only attention required is to wipe the nipple previously to nursing and apply the shield again immediately afterwards. *They are in no way likely to be injurious to the infant.*"

The mother according to her testimony wore the nipple shields in accordance with the directions. The shields were described as being of pure metallic lead, shaped somewhat like a small sombrero hat with the base somewhat slightly larger than a silver dollar. In some six months following birth, the infant showed signs of illness.

The mother testified to having worn the shields steadily except during certain periods prior to which she claims to have properly cleansed her breasts with boric acid solution.

The child became violently ill and was removed to a hospital where his condition was diagnosed as lead poisoning. Plaintiff contended that the child had ingested lead from the mother's breasts, in spite of her cleansing process which had been deposited in the fissures of the said breasts, that the nipple shields were inherently dangerous and were marketed without proper warning or instructions.

The Trial Justice, before whom the case was tried, granted judgment in favor of the defendant dismissing the case on the merits after hearing the testimony, and handed down a well-written opinion saying in part:

'No one will gainsay the claim that if a product is inherently dangerous or is known to contain hidden danger that a relative duty rests on

the manufacturer or the one marketing such products as his own to give fair warning or instructions to the using public. From the evidence in this case it appears that many thousands of these appliances have been sold and used both in England and in the United States for a period of more than ninety years. In all of that period only once, so far as the evidence discloses, did any member of the medical profession question their safety or efficiency for the use for which they were intended. That occasion was in the course of a paper published in the *Journal of the American Medical Association*, May 15, 1926, and the first of the 2 cases there referred to must be conceded to be of no value since the cited history of the case indicates that 'The first mother was negligent in washing her nipples.' The second case referred to is one based, of course, on hearsay, there being no direct evidence before this court with reference to its authenticity. In the opening sentence of this medical article the authors say 'Lead poisoning in nursing infants is extremely rare. One cannot be certain that the nursing infants may not also have sucked lead from the skin or hair of the mothers, or earned it to their mouths on their hands.'

'Further, they observe that 'we have not found the use of lead nipple shields by nursing mothers previously demonstrated as a source of lead poisoning in infancy.'

Other medical authorities referred to in this article call attention to cases of lead poisoning due to the use of nursing bottles that had had lead incorporated into the glass, of nursing bottle stoppers, both of metallic lead and of lead-containing rubber and from lead frames in which nursing bottles were held, of lead powders used by mothers as cosmetics, and inhalation of lead dust, lead paint from a doll, and clothing material impregnated with lead. These are given as sources of lead poisoning in infants of nursing age.

'Say the authors, 'Personal communication with obstetricians in New York testifies that the lead nipple shield is a commonly employed therapeutic measure in both dispensary and private practice. The duration of the use of the shields is usually less than one month, and a careful washing of the nipples previous to each nursing is advised. Under such conditions there has been apparently no intoxication in the nurselings.'

"And so we have a situation of this manufacturer and marketer supplying vast quantities of these shields with no knowledge that they were in any sense dangerous."

The Court also said, with reference to the possibility that the infant was idiosyncratic or hypersensitive to lead, the following:

It is a matter of common knowledge that many persons are allergic to conditions which do not affect the normal individual. Cases so

\* *Clardy v. Marks Co.*, 103 New York Law Journal 1063.

## Ledyard Fellowship Awards Announced by the New York Hospital

**F**IRST awards under the Lewis Cass Ledyard, Jr., Fellowship, "for original medical research of high order," have been made to Dr Willis Fiske Evans, of Richmond, Virginia, and Dr Charles O Warren, Jr., of Boston, it was announced today by Henry S Sturgis, treasurer of the New York Hospital.

The fellowship was established last year by Mrs Ruth E Ledyard in memory of her husband, a governor of the hospital. Inasmuch as no appointment was made at that time, the present awards are for both 1939 and 1940.

Dr Evans, whose fellowship provides for a study of the peripheral blood flow, attended Randolph Macon College and the Medical College of Virginia. He was an instructor in pathology at the University of Virginia Medical

School, and currently is conducting research in cardiology at Cornell Medical College.

Dr Warren, who will continue research under the award in the physiology of the bone marrow, attended Cornell University and Medical College, and received a doctorate of philosophy at New York University. He is an instructor in physiology at Cornell Medical College and is a recipient of a grant in aid of research from the Committee on Scientific Research of the American Medical Association.

Under the terms of the annual award, approximately \$4,000 will be provided for the research of each fellow chosen from applicants in all parts of the country. The fund was established to aid research "in the fields of medicine and surgery or any closely related field."

## AMERICAN LARYNGOLOGICAL, RHINOLOGICAL, AND OTOLOGICAL SOCIETY

The Annual Meeting of the Society will be held at the Waldorf-Astoria in New York City on June 6, 7, and 8, 1940.

Laryngological Association	May 27, 28, 29
Otological Society	May 30, 31
American Board	June 3, 4, 5
Broncho-Esophagological Society	June 5
Rhinological Society	June 6, 7, 8
American Medical Association	June 10-14

As usual, only morning sessions will be held. This will give the Fellows an opportunity to visit hospitals and clinics, as well as the World's Fair and other attractions New York City offers.

This year all the national otolaryngologic societies will meet in or near New York City on consecutive dates. The schedule is as follows:

Westchester Country Club, Rye, N Y
Westchester Country Club, Rye, N Y
New York City
New York City
New York City
New York City

Dr Hurd has arranged a scientific program with some decidedly controversial papers, and he hopes that the discussion will be free, concise, and to the point.

## Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Thomas M Acken	72	N Y Univ	December 11	Manhattan
Carroll B Bacon	71	Jefferson	February 24	Waterloo
Eugene E Bauer	69	Buffalo	February 25	Owego
T Drysdale Buchanan	64	N Y Hom	March 21	Manhattan
Henry C Buswell	78	Niagara	March 4	Buffalo
Harriet Doane	66	Syracuse	March 11	Pulaski
Thomas J Dowd	58	Albany	February 19	Ticonderoga
James T Flanagan	57	Johns Hopkins	February 28	Brooklyn
Albert C Geyser	75	Bell	March 5	Huntington
Benjamin A Gipple	74	Buffalo	December 30	Alden
Homer J Grant	71	Albany	March 16	Buffalo
Lewis Greenberg	52	Univ & Bell	March 10	Manhattan
Benjamin L Grodmitzky	66	Kiev, Russia	February 24	Saratoga Springs
		Paris, France		
William G Hoyt	83	P & S N Y	February 29	Mount Tremper
John W Keeler, Jr	59	Maryland	In February	Hammondsport
Arthur F Kraetzer	48	Cornell	March 4	Manhattan
Raphael F Medrick	71	Pennsylvania	March 21	Port Jervis
Ralph W Nutter	47	Univ Vt	February 26	Manhattan
Austen F Riggs	63	P & S N Y	March 5	Manhattan
Dudley Roberts	66	P & S N Y	March 8	Manhattan
Edwin L Rose	73	P & S N Y	March 17	Manhattan
Jacob L Rubinstein	56	Maryland	February 27	Bronx
Charles Stover	89	Pennsylvania	April 9	Amsterdam
Edmund C Van Dusen	80	N Y Univ	March 19	Athens
Olive W Wheaton	43	Cornell	March 2	Huntington

# Hospital News

## For Medical-School Supervision of Interns

**A** WARNING that the period of internship served by graduates of medical schools must be brought under the joint supervision of medical schools and hospitals if enough physicians are to be trained to meet American medical standards is voiced by Dr Willard C Rappleye, dean of the College of Physicians and Surgeons, Columbia University, in a report made public.

The present practice of leaving internships to the sole supervision of hospitals some of which are not suited to provide adequate practical educational background for the country's future general practitioners and specialists, is "the most defective segment in modern medical education," Dr Rappleye says.

He advocates a plan whereby medical schools state licensing boards, and hospitals able to provide adequate educational experience in the internship would cooperate toward "the integration of the medical school and hospital phases of the basic preparation" for medical practice. This can be carried out, he says, if the medical schools in each section of the country are grouped into regional committees to evaluate the internships of their respective areas on the basis of actual first-hand study and knowledge of the hospitals of their respective areas.

### Changes Required

Such a plan, he states, should result in significant changes in school as well as hospital procedures and should be kept flexible to meet variations in the facilities and instructional personnel of individual hospitals.

"As a part of this undertaking," Dean Rappleye suggests, "the state boards of medical examiners should be requested to require an internship under educational supervision as a prerequisite for admission to the licensing examination, such a requirement to become effective at a date in the future mutually agreed upon by the schools and boards."

"The intern period," Dr Rappleye writes, "should be focused on the completion of the major clinical clerkships of the medical course and form the basic preparation to begin general practice, leaving training in the specialties to the graduate field. An internship can be satisfactory only when the staff is competent to provide instruction and take the responsibility by means of a director of educational activities or a strong committee of the staff for making such training effective."

This conception of the internship and its articulation with the undergraduate course will require extensive modification of existing arrangements in many hospitals, including a considerable number of teaching institutions and the affiliation with medical schools of those hospitals which can provide satisfactory training but which are not now closely associated. The plan would require the cooperation of those state medical boards which have established rigid regulations of the intern period and have prescribed numerous requirements which tend to

impede the efforts to make the internship a true educational experience.

"The intern period should be focused on the principles of internal medicine, pediatrics, and nonoperative surgery."

"Satisfactory plans of graduate teaching can be carried out, however, only in those institutions in which the hospital services are properly organized, the staff competent to provide real instruction and willing to organize themselves and take the responsibility for teaching, and in which the hospital administration encourages instruction. The program should include close cooperation of the hospitals and medical schools to provide preparation in the medical sciences related to the specialties as well as adequate supervised clinical training."

## Hospitals Prepare for Respiratory Epidemic

**D**ECLARING that a wave of respiratory infections "of huge proportions" is moving toward New York City from southern states, Dr S S Goldwater, hospital commissioner, has appealed to the city's private hospitals to aid in relieving overcrowding in the twenty-six city hospitals.

As proof that the city hospitals are taxed well beyond their bed capacity, Dr Goldwater said that census showed 1,500 patients above maximum bed capacity. Normally the hospitals have about 18,000 patients, but now have 20,340. Though accident cases have been numerous, Dr Goldwater said most of the overflow was caused by diseases of the respiratory tract. The influx of cases shows many patients suffering from grippe, heavy laryngitis, influenza, and similar respiratory diseases.

Serious as these conditions are," Dr Goldwater said, "there is a prospect that additional demands may be made upon the hospitals during the coming weeks, for reports from the southern states indicate that a wave of respiratory infections of huge proportions is gradually moving toward New York City from the south."

Within a few hours after the receipt of Dr Goldwater's appeal the executive committee of the Greater New York Hospital Association met, and after a hurried survey of available beds, ward space, and other facilities, sent a reassuring message to the commissioner of hospitals.

"I am very happy to tell you," John McCormack, president of the association, wrote to Dr Goldwater "that all of such hospitals (represented at the meeting) and also all of the members of our executive committee were unanimous in authorizing me to reply immediately in their behalf to say that they would by all means in their power endeavor to meet the emergency which you describe."

"Still others" the letter added "have offered to defer the admission of cases which were not of an emergency character in order to meet the special demand to which your letter refers. Some others stated that they would take other steps in order to be able to accept during this temporary crisis additional numbers of city cases."



holding are legion with reference to wearing apparel, cathartics, face powders, and sedatives. In this state it has been held that 'A preparation is not deleterious to human health in the ordinary acceptance of that term simply because one person in a multitude of those using it happens to meet with ill effects from taking it.' How from the evidence before this court can it be determined whether or not this infant was the subject of a peculiar hypersensitivity to the almost insignificant lead deposits (if there were any) upon the mother's breasts? It is the plaintiff upon whom rests the burden of proving this case by a fair preponderance of the evidence. Prior to the time that this infant became ill there was no way of determining whether the infant would, by some idiosyncratic reaction, respond to the infinitesimal quantities of lead which it is claimed were ingested with each feeding and extending over this six or seven months' period."

The Court also said in its opinion

"The mother's testimony of her strict adherence to instructions is received with great caution, for it undoubtedly is tainted not only by her interest in the infant, but in defense of her own conduct. This infant was kept in a painted crib. Sucking the sides of the crib or rubbing its gums thereon might well again be a competent producing cause of lead ingestion, and in spite of the mother's denial there still remains the probability that the infant was permitted to use these shields, while worn by the mother, as pacifiers are frequently used."

### Plastic Surgery of the Face

A WOMAN about fifty years of age, desiring the performance of plastic surgery to improve the appearance of her face, consulted a physician who in his practice did a considerable amount of plastic surgery.

It seems that sometime before some other surgeon had performed a face lifting operation with the unsatisfactory results of scars in the region of the ears and under the chin. Over a period of about a year, four operations were per-

formed by the doctor. The first of said operations included the excision of an elliptical piece of skin across the chin, removing the old scar and the removal of the scar tissue near the ears. Although the patient was somewhat uncooperative following the operation, interfered with the bandages, and applied substances to the region of the sutures, the use of which he disapproved, a good result seemed to follow.

Some four months after the said operation another was performed for the purpose of eliminating a sagging condition under the eyelids. The doctor found after this operation that the sagging was not completely corrected, due to lack of elasticity of the skin. When this condition manifested itself, he learned for the first time that the patient had, on certain occasions prior to his being consulted, undergone so-called peeling treatments for the purpose of correcting the sagging under the eyes.

A third operation was for the purpose of removing a certain scar in the area of the left temple. A fourth operation was for the purpose of attempting by a graft procedure to lift the sagging eyelid.

At the conclusion of the various operations the patient's condition and appearance seemed to have been vastly improved and the patient appeared to be satisfied, but she requested the doctor to perform additional surgery in a further attempt to restore her beauty. The physician refused to agree to operate further, and later a malpractice action was instituted against the physician.

Upon trial of the action before the court and a jury, the claim of malpractice that was pressed was that, in performing the operation to overcome the sagging below the eyes, the defendant had failed to follow proper practice.

The doctor denied any departure from proper practice and emphasized the fact that the same condition had been previously treated by peeling, which accounted for the difficulty encountered.

The issues were submitted to the jury and a verdict rendered in favor of the defendant, thereby exonerating him of all charges of malpractice.

### CHANGE OF ADDRESS

AFTER APRIL 15, 1940

**The Medical Society of the State of New York**

*WILL BE LOCATED AT*

**292 Madison Avenue, New York**

Telephone: MURRAY HILL 3-9841

home at Neponsit Beach Hospital in Queens, and chronic disease laboratories at Welfare Hospital

He asked an increase in the number of nurses and about \$150,000 for payments to some dispensary physicians at the rate of \$5 00 a clinic session. With a bed capacity of 20,000 in thirty institutions, Dr. Goldwater said the actual bed occupancy often exceeded the capacity

As result of a revival of a proposal that the city discontinue the Utica General Hospital, as a means of reducing city expenses a study of costs of caring for the indigent sick in other cities of the state is being made.

The proposal to have the city-operated hospital discontinued as a place for caring for those unable to finance hospitalization has been before various city administrations periodically for about twenty years and is being revived by the Civic Affairs Committee as one of several plans worthy of investigation in the search for means for reducing the costs of the local government.

Local newspapers report that the plan to close the Hospital for Communicable Diseases in Yonkers as an economy measure has been shelved for the present.

Binghamton City Hospital with 9,842 patients and expenses of \$557,303 40, ended 1939 with a cash balance of \$25,417 54, the board of managers informed the City in its annual report

### Improvements

The Francis Coe Pratt Memorial Clinic for the treatment of cancer, certain types of infections, and benign tumors opened on February 12 at Ellis Hospital Schenectady

The clinic is a free institution to which the attending physician may bring his patient for diagnosis by a group of specialists. Other specialists will be appointed to the clinic as needed

Albany County administration leaders are considering construction of a county hospital to care for welfare patients

The project is partly contingent on the hospitalization program of President Roosevelt, now before Congress. Should the Roosevelt plan of federal financing of local municipal hospitals be enacted, it was said, Albany would seek an allotment of the appropriation for a county hospital

Oneida County Hospital contemplates adding an annex to the nurses' home.

The new Rome Hospital will be ready for occupancy early in April

Installation of the new radiographic unit at Nathan Littauer Hospital at Gloversville at a cost of approximately \$12,000, which gives the institution x-ray equipment as modern as any to be found in New York State, has been completed and the equipment is now in use.

A \$1,000,000 hospital for mental cases will be built in Queens this spring, it was revealed when the City Planning Commission approved map changes to allow the hospital to use a fifty-two acre plot bounded by Motor Parkway, the Nassau County line 76th Avenue, and 263rd Street, Little Neck.

Three major buildings and a series of small cottages in which patients will be housed will be erected on the site by the Association of Hillside Hospital it was learned.

The hospital is now located in Hastings-on-Hudson, according to Borough President Harvey, who submitted the request for the map change.

Dr. Israel Strauss, director of the hospital, said the hospital is twelve years old and cares for mild neurosis cases

Neponsit Hospital for children will be enlarged from one hundred twenty beds to two hundred. The hospital also has a new power plant, laundry, and workers' dormitory, and the new nurses' home is near completion

### A NEW MOTION PICTURE ON TUBERCULOSIS

To the 1,500,000 Spanish people in the United States the National Tuberculosis Association has dedicated its new sound motion picture "Cloud in the Sky"

The story opens with a lively fiesta but its gay tempo suddenly changes to one of sadness when the mother of a family dies from tuberculosis. A year later the eldest daughter, who is now responsible for the household including a brother and sister, develops the same symptoms that marked her mother's illness. Through the offices of the wise padre, the father is persuaded to take his daughter to a physician who discovers on x-ray examination a shadow like a "cloud in the sky" in the girl's lungs. Arrangements are made for her admission to a tuberculosis sanatorium, where she receives care and treatment

which result in her complete recovery. The measures taken to safeguard the younger members of the family, including careful instruction of the father who in turn becomes a missionary for tuberculosis prevention among his friends, are woven ingeniously into the plot. The picture is universal in its appeal.

The State Department of Health has added the English version of this sound film, in the 16-mm width to its stock of health motion pictures and is prepared to lend it, subject to the usual conditions for group showings in the upstate area where are told in *Health News*. The running time is about eighteen minutes. Requests should be addressed to the Supervisor of Visual Instruction, State Department of Health, Albany, New York.

Mr McCormack pointed out that the emergency program contemplated by the voluntary hospitals would impose a "heavy additional financial burden upon them," since the city pays only \$3 a day for the care of its patients in private institutions, approximately one-half the cost.

"Nevertheless," Mr McCormack wrote, "we will try to meet this acute demand regardless of financial sacrifice. As a whole, our voluntary hospital system has the bed capacity to render greater assistance to the city as its partner in caring for the indigent sick, but how long we can continue to carry the present heavy financial burden without further cooperation from the city, we do not know, and can only assure you that we will do our best."

City Controller Joseph D McGoldrick states that he will ask the Board of Estimate to increase the rate paid to private hospitals for city patients to \$4.25 a day.

### Latest Wrinkle—a "Parentorium"

**A** NEW spring term for the Mothers' Round Table opened last month, the fifth year in a novel experiment carried on at the National Hospital for Speech Disorders in New York City. Since the group was organized for mothers of child clinic patients, waiting rooms at the hospital are sparsely occupied, and the progress of the children under treatment has been notably advanced.

The idea of putting to useful advantage the hours that parents must spend waiting until their children are returned to them from the medical social clinic originated with Dr James Sonnett Greene, director of the institution at 61 Irving Place. It worried him that so much time was necessarily wasted by parents who passed the hours in reading or napping, and in various degrees of nervousness or irritation.

Since the "parentorium" was opened five years ago its results have been far reaching, he said, in coordinating the hospital's work with the patient's home environment.

Mrs Angie Graham Kimberland, psychiatric social worker, was placed in charge of organizing classes for the mothers where they are given instruction in child psychology and in meeting maladjustment problems at the basis of many speech difficulties such as stuttering and stammering.

During the two hours that the children spend at the clinic or its kindergarten their mothers attend meetings of their Round Table club. Officers are elected annually and the sessions are conducted according to parliamentary rules. Mrs Kimberland is their mentor in a series of lectures on the broad field of personal adjustment in nervous disorders.

After the talk, members carry on discussions of their individual problems and with her counsel attain a measure of understanding which forms one of the best allies for the clinic doctors.

Development of personal interests is encouraged by excursions to art exhibits and commercial institutions, which Mrs Kimberland arranges at frequent intervals during the term.

"Since we have taken on these mothers of our clinic children as patients and taught them a child's needs at home, our progress in therapeutics has been tremendous," Dr Greene said. "We have succeeded in interesting the parents

through increasing their understanding of the maladjustments which cause speech defects.

"Before the parentorium was opened we frequently found that the progress noted in the clinic was counteracted by home environment, where the child spends the major part of his time. By including mothers in the treatment we have been able to remove much of the home pressure."

### Newsy Notes

To meet the urgent need for additional semi-private care facilities, Rochester's seven major hospitals will make fifty to seventy more beds available as soon as possible.

This decision of hospital directors was announced following a conference with representatives of the Rochester Hospital Service Corporation.

Increased use of hospital facilities under hospitalization insurance has brought growing demand for private and semiprivate beds, with corresponding decrease in the use of ward service accommodations, it was explained.

The Rochester Hospital Service Corporation was forced recently to invoke for the first time a clause providing that if hospital room is not available it would defray cost of home care.

Some hospitals plan to divide present ward areas into semiprivate rooms through use of permanent partitions. Others will convert rooms now used for other purposes, it is expected. General Hospital advised that it would convert an entire floor now used for ward service to semi-private accommodations.

The proposal to find additional semiprivate beds is only an approach to a long-range problem, hospital heads said.

A boy scout troop is being organized in the Crippled Children's School of the Meyer Memorial Hospital in Buffalo under the sponsorship of the women's auxiliary headed by Mrs Thomas B Lockwood.

Dr Walter S Goodale, hospital superintendent, announces that the troop will be one of the few of its kind in the country and is one of the outstanding achievements of the program of the women's auxiliary since it was organized last year.

The Hospital for the Ruptured and Crippled, 321 East Forty-second Street, and St. John's Guild, 1 East Forty-second Street, New York City, have agreed to the joint operation of the Seaside Hospital, New Dorp, Staten Island, a children's institution, on a year-round basis the Hospital Council of Greater New York announces. The Staten Island Hospital has been operated in the past by the Guild alone for three months each summer.

Dr S S Goldwater, hospital commissioner, has requested a \$4,320,319 increase in his budget estimated to \$32,763,330 for the next fiscal year.

Dr Goldwater said new and expanded facilities to be put in use during the fiscal year included the Triboro Hospital for Tuberculosis in Queens, the Consolidated Dispensary for the Welfare Island institutions, new wards and a new nurses'

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn N Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers.

## BOOKS RECEIVED

**Sex and Life** Forty Years of Biological and Medical Experiments By Eugen Steinach, M D Octavo of 252 pages, illustrated. New York, The Viking Press, 1940 Cloth, \$3 75

**Modern Urology for Nurses** By Sheila M Dwyer, R N, and George W Fish, M D Octavo of 290 pages, illustrated Philadelphia, Lea & Febiger, 1940 Cloth, \$3.25

**Injection Treatment of Hernia, Hydrocele, Ganglion, Hemorrhoids, Prostate Gland, Angioma, Varicocele, Varicose Veins, Bursae, and Joints.** By Penn Riddle, M D Quarto of 290 pages, illustrated Philadelphia, W B Saunders Co, 1940 Cloth, \$5 50

**Diseases of the Gallbladder and Bile Ducts** By Waltman Walters, M D, and Albert M Snell, M D Octavo of 645 pages, illustrated Philadelphia, W B Saunders Co 1940 Cloth, \$10

**Manual of Cardiology Clinical Methods and Case Histories as Problems for Study** By William D Reid, M D Octavo of 364 pages New York, Oxford University Press, 1940 Cloth, \$3 50

**Clinical Toxicology** By Clinton H Thienes, M D Octavo of 309 pages, illustrated. Philadelphia, Lea & Febiger, 1940 Cloth, \$3 50

**The Diagnosis and Treatment of Diseases of the Esophagus.** By Porter P Vinson, M D Octavo of 224 pages, illustrated Springfield, Charles C Thomas, 1940 Cloth, \$4 00

**Protozoology** By Richard R Kudo, D Sc. Second edition. Enlarged and completely rewritten edition of "Handbook of Protozoology." Octavo of 689 pages, illustrated Springfield, Charles C Thomas, 1939 Cloth, \$6 50

**Shock. Blood Studies as a Guide to Therapy** By John Scudder, M D Quarto of 315 pages illustrated Philadelphia, J B Lippincott Co, 1940 Cloth, \$5 50

**Pneumoconiosis (Silicosis) The Story of Dusty Lungs A Preliminary Report** by Lewis G Cole, M D, and William G Cole, M D Quarto Illustrated New York, The Authors, 1939 Cloth, \$1 00

**Combined Textbook of Obstetrics and Gynecology** For Students and Medical Practitioners Revised and rewritten by J M Munro Kerr M D Third edition. Quarto of 1,192 pages illustrated Baltimore, Williams & Wilkins Co 1939 Cloth, \$12

**Illustrations of Bandaging and First-Aid.** Compiled by Louis Oakes, D N Octavo of 248 pages, illustrated Baltimore, Williams & Wilkins Co 1940 Cloth, \$2 00

**Savill's System of Clinical Medicine** Dealing with the Diagnosis, Prognosis, and Treatment of Disease for Students and Practitioners Edited by Agnes Savill, M D, and E C Warner, M D Eleventh edition Octavo of 1,141 pages, illustrated Baltimore, William Wood & Co, 1939 Cloth, \$9 00

**Sexual Disorders in the Male** By Kenneth Walker, F R C S, and Eric B Strauss, D M Octavo of 248 pages, illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$3 00

**Illustrations of Surgical Treatment. Instruments and Appliances** By Eric L Farquharson, M D Quarto of 338 pages, illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$6 50

**Injuries of the Skull, Brain and Spinal Cord. Neuro-Psychiatric, Surgical, and Medico-Legal Aspects** Edited by Samuel Brock. Octavo of 632 pages, illustrated Baltimore, Williams & Wilkins Co, 1940 Cloth \$7 00

**Heil Hunger! Health Under Hitler** By Dr Martin Gumpert. Translated from the German by Maurice Samuel. Octavo of 128 pages New York, Alliance Book Corp, 1940 Cloth, \$1 75

**Good Health and Bad Medicine A Family Medical Guide.** By Harold Aaron, M D Octavo of 328 pages New York, Robert M McBride & Co, 1940 Cloth, \$3 00

**Accepted Foods and Their Nutritional Significance** Containing Descriptions of the Products Which Stand Accepted by the Council on Foods of the American Medical Association. Octavo of 492 pages Chicago, American Medical Association, 1939 Cloth, \$2 00

**Reports on Medical Progress as Published in the "New England Journal of Medicine"** Compiled and edited by Robert N Nye, M D Octavo of 562 pages Boston, Little, Brown & Co, 1940 Cloth, \$5 00

**Trapping the Common Cold.** By George S Foster, M D Duodecimo of 125 pages New York, Fleming H Revell Co, 1940 Cloth, \$1.25

**Tuberculosis and National Health.** By H Hyslop Thomson, M D Octavo of 259 pages London, Methuen & Co Ltd, 1939 Cloth, 10/6

**Disorders of the Blood. Diagnosis, Pathology, Treatment and Technique** By Lionel E H. Whitby, M D, and C J C. Britton, M D Third edition. Octavo of 603 pages, illustrated Philadelphia, Blakiston Co, 1939 Cloth, \$7 50

**Manual of Dermatology** By Carroll S Wright, M D Octavo of 376 pages, illustrated Philadelphia, Blakiston Co, 1940 Cloth, \$4 00

**The Management of Obstetric Difficulties.** By Paul Titus, M D Second edition. Octavo of 968 pages, illustrated. St Louis, C. V Mosby Co, 1940 Cloth, \$10

**The New International Clinics. Original Contributions Clinics, and Evaluated Reviews of Current Advances in the Medical Arts** Edited by George M Piersol, M D Volume I, New Series Three Octavo of 319 pages, illustrated. Philadelphia J B Lippincott Co, 1940 Cloth, \$3 00

# Maternal Welfare

*The Maternal Welfare Committee of the Medical Society of the State of New York introduces a new section in this issue of the JOURNAL. The Maternal Welfare Committee will devote this section to obstetric problems as they pertain to the work of the general practitioner of medicine—Editor*

**A** GENERAL review of obstetric literature shows that a majority of the articles therein deal with highly specialized phases of obstetrics and that they are of little or no interest to the man who is primarily concerned with the handling of the type of maternity work usually encountered in general practice. The committee will present a series of comprehensive articles which should be of such practical value

A few of the titles follow

Diagnosis of Early Pregnancy, Routine Prenatal Visits, Diet in Pregnancy, Early Recognition of Toxemias, When Should Therapeutic Abortion be Considered?, How Far Should the General Practitioner Go with Relief Measures During Labor?, Danger Signs During Labor, In What Type of Cases Should Cesarean Section be Considered?, What About the Patient Who Has Been in Labor Twenty-Four Hours?, Postpartum Examination and the Treatment of Postpartum Pathologic Conditions

These subjects are listed for the purpose of determining whether they will be of interest to the majority of practitioners. The committee requests physicians who are sufficiently interested in the presentation of such a series of articles to communicate with the Maternal Welfare Committee and make requests for other subjects

It is the opinion of the Maternal Welfare Committee that one of the most valuable methods of promoting postgraduate obstetric education lies in the careful study of individual maternal mortalities. Several of the county medical societies have undertaken the analysis of all maternal mortalities occurring in their

communities. Each case is presented anonymously. Neither patient, hospital, nor attending physician is identified. The case is then discussed with the specific idea of bringing out points in diagnosis or treatment that might be of value in similar cases encountered in the future.

It is the hope of the committee that all county societies in the state will eventually sponsor such an analysis group. A demonstration of its functioning will be presented at the May, 1940, meeting of the Medical Society of the State of New York.

Most component county societies of the State Society have maternal welfare committees, a few do not. It is recommended that all societies form a maternal welfare committee. It is further suggested that each have a representative present at the demonstration session showing the functioning of the maternal mortality analysis group mentioned above.

The Maternal Welfare Committee will present an exhibit on Maternal Welfare at the next meeting of the Medical Society of the State of New York.

The inauguration of the section of Maternal Welfare affords the Maternal Welfare Committee the opportunity of soliciting suggestions from the individual members of the State Society. Kindly address communications to

CHARLES A. GORDON, M D, *Chairman*  
JAMES K. QUITLEY, M D  
FERDINAND J. SCHOENBECK, M D

The University of Buffalo Medical Alumni Association will hold its Sixth Annual Spring Clinical Day on Saturday, April 20, 1940, at the Hotel Statler, Buffalo, New York. Following are the speakers: "The General Practitioner's Anorectal Problems," Newton D. Smith, M D, Section of Proctology, Mayo Clinic, Rochester, Minnesota; "Diagnosis and Treatment of Fevers of Obscure Origin," James G. Carr, M D, associate professor of medicine, Northwestern University, Chicago; "Hypertension: The Modern Conception of Its Causes and the Results of Medical and Surgical Treatment," Henry M.

Thomas, Jr., M D, associate professor of medicine, Johns Hopkins Medical School, Baltimore; "Some Problems Presented by the Jaundiced Patient," Albert M. Snell, M D, Section of Medicine, Mayo Clinic, Rochester, Minnesota; "Observations on Human Refrigeration," Temple Fay, M D, professor of neurology and neurosurgery, Temple University, Philadelphia.

On Saturday evening, April 20, 1940, there will be reunions of the classes of 1880, 1885, 1890, 1895, 1900, 1905, 1910, 1915, 1920, 1925, 1930, and 1935.

## ROUND-TABLE—KINGS COUNTY MEDICAL SOCIETY

The Kings County Medical Society announces a round-table discussion on "Gonorrhea in Men, Women, and Children," for physicians-in-practice, medical students, and public health workers. Meetings are scheduled for Saturdays, April 20, April 27, May 4, and May 11, at the

society's headquarters, 1313 Bedford Ave., Brooklyn, from 11 A M to 12 noon. Invited specialists will lead the discussions. For further information and detailed program write to Dr. Charles McCarty, at the offices of the Kings County Medical Society.

activity in Egypt and early Jewish physicians in America. Among contemporary problems, the survey of the status of Jewish medical students in America and the problem of the medical refugee in the United States are most timely topics.

GEORGE ROSEN

**The Morphology of the Brachial Plexus** With a Note on the Pectoral Muscle and Its Tendon Twist. By Wilfred Harris, M D. Quarto of 117 pages, illustrated. New York, Oxford University Press, 1939. Cloth, \$8.00.

The monograph is based upon dissections of the brachial plexus in 158 cases in 30 humans, 6 anthropoid apes and 37 monkeys, and 85 other animals and birds, including fishes, from the Amphibia and reptiles to Primates.

The author describes the different types of brachial plexus patterns in the various forms of life mentioned and gives a summary of the brachial plexus in man. There is also a chapter on the pectoral muscle and its nerve supply.

This book is a highly technical exposition of a subject that should appeal to the anatomist and to all others who have a special interest in anatomy.

IRVING J SANDS

**Community Health Organization. A Manual of Administration and Procedure** Primarily for Urban Areas. Edited by Ira V. Hiscock. Third edition. Octavo of 318 pages. New York, The Commonwealth Fund, 1939. Cloth, \$2.50.

This book is intended primarily for the health worker's library, but several chapters have a direct interest for the practitioner of medicine. The physician should play a very important part in the community health program and information such as this volume contains will be helpful to him.

In the control of tuberculosis, syphilis, gonorrhea, and communicable diseases generally a knowledge of the procedures applied by the health departments and why they are necessary will make the physician more willing to cooperate.

The maternal, child and school health programs are described briefly and show the extent to which government has gone in this field of health service.

A chapter on newer health problems includes topics such as nutrition, mental hygiene, cancer control, and heart disease. The description of progress made in these particular fields from the community standpoint should cause the physician to reflect on his part during the coming years in the campaign for health preservation.

ALFRED E SHIPLEY

**The Circulation of the Brain and Spinal Cord** A Symposium on Blood Supply. Volume 18 of a Series of Research Publications of the Association for Research in Nervous and Mental Diseases. Octavo of 790 pages, illustrated. Baltimore, Williams & Wilkins Co., 1938. Cloth, \$10.

For all around value this publication of the Association for Research in Nervous and Mental Disease, ranks as one of the best of the eighteen volumes comprising the series. The editorial board is to be congratulated on the subject selected and the general excellence of the papers

included. With the exception that little mention is made of the clinicopathologic results of occlusion of the cerebral veins, practically every phase of the cerebral circulation is covered.

The book is divided into three sections: the first dealing with anatomy and physiology, the second with pathology, and the third with clinical contributions. The final chapter contains summary and comments and imparts a pleasing cohesiveness to the whole work. In the 750 pages are listed 17 tables and 288 illustrations, indicating the care taken to clarify the material presented.

The reviewer is impressed by this volume that represents the most recent opinions on the subject of cerebral circulation. It is an able "re-statement of the current conception of the truth."

H R MERWARTH

**Symptoms and Signs in Clinical Medicine** An Introduction to Medical Diagnosis. By E. Noble Chamberlain, M D. Second edition. Octavo of 435 pages, illustrated. Baltimore, William Wood & Company, 1938. Cloth, \$8.00.

This admirable book is a model of what a treatise on physical diagnosis should be. It is well suited for use by the student but can be read with profit by any physician. The text is well arranged, it is complete without verbosity, and the illustrations are excellent and intelligently selected.

One especially noteworthy feature of this text is a section of over one hundred pages on examination of the nervous system. Dr. Norman Capon contributes a good chapter on pediatric examination. There are brief but useful chapters on clinical pathology and instrumental investigations such as paracentesis, lipiodol injection, lumbar puncture, etc. The author should have mentioned the use of lipiodol bronchography without laryngeal catheterization or bronchoscopy by one of the direct inhalation methods extensively used in this country. The principal change in this revision has been the assembling in the last two chapters of all laboratory and scientific sections instead of including this material in the other text matter.

MILTON PLOTZ

**Menstrual Disorders** Pathology, Diagnosis and Treatment. By C. Frederic Fluhmann, M D. Octavo of 329 pages, illustrated. Philadelphia, W B Saunders Co., 1939. Cloth, \$5.00.

This book on disorders of menstruation is full of helpful information. The author attempts to set forth present ideas of the physiology of the menstrual cycle and various disorders that may occur under influence of disease. He places special emphasis on the important endocrine factors but views the whole subject as a general problem facing the practitioner.

Information of interest and value is found all through the book, but the parts on sex hormones, and on the endocrine control of menstruation are especially helpful. One section takes up the treatment of pathologic uterine hemorrhage and the final chapter considers the menopause in all its intricate phases.

Practitioners and specialists will be well repaid by a careful study of this interesting book.

WILLIAM SIDNEY SMITH

## REVIEWED

**Principles of Chemistry** An Introductory Textbook of Inorganic, Organic, and Physiological Chemistry for Nurses and Students of Home Economics and Applied Chemistry, with Laboratory Experiments By Joseph H Roe, Ph D Fifth edition Octavo of 503 pages, illustrated St Louis, C V Mosby Co, 1939 Cloth, \$3 00

In this edition the author presents a well-rounded and detailed book in a very elementary fashion, intended originally for a course in chemistry for nurses The first part of the book is devoted to principles of biochemistry and metabolism There are chapters on hydrogen, oxygen, water, and the structure of matter

Principles of physical chemistry are presented in other chapters devoted to the subjects of solutions, ionization, acids, bases, oxidation, and reduction There are still other chapters which present, in simple style, the more important aspects of organic chemistry The last part of the book contains numerous chapters on laboratory experiments

The author has thus incorporated in one small volume an elementary presentation of biochemistry, physical chemistry, organic chemistry, and the physiology of metabolism

WILLIAM S COLLENS

**The New International Clinics** Original Contributions Clinics and Evaluated Reviews of Current Advances in the Medical Arts Edited by George M Piersol, M D Volume 1, New Series Two Octavo of 312 pages, illustrated Philadelphia, J B Lippincott Co, 1939 Cloth, \$3 00

This volume upholds the standard set in previous issues of the new clinics Many topics are presented, gastric and duodenal conditions, electrocardiography, ventricular fibrillation, sudden death in heart disease, chronic burcellosis, diabetes mellitus are carefully discussed In the clinicopathologic conferences, the subject of lymphosarcoma is discussed This volume is valuable because of the variety and quality of the subjects presented

HENRY M MOSES

**Preclinical Medicine** Preclinical States and Prevention of Disease. By Malford W Thewlis, M D Octavo of 223 pages Baltimore, Williams & Wilkins Co, 1939 Cloth, \$3 00

The title is defined by the author as "that branch of medicine which ascertains disease conditions which are likely to occur, such as peptic ulcer, osteoarthritis, and especially the degenerative diseases Its purpose is to detect disease tendencies before they reach even the incipient or symptom stage"

The term "soil" is used by the author to describe the sum of the physical peculiarities of the patient together with tendencies to some particular type of disease, and many patients are said to pass through a "conditioning period" during which the "soil" is being prepared for the development of a definite disease The patient is studied during this period, and the means of doing this are described Infectious and noninfectious diseases are studied from the

point of view as noted, although, as the author states, it is not possible to avoid some discussion of clinical medicine Each chapter has an extensive bibliography

This seems to be the first book concentrating upon this important field Unfortunately, very little is known about the origin and early diagnosis of many diseases especially the cardiovascular, renal, and most chronic diseases. The author has soundly reviewed our present knowledge of the predispose state in a detailed and careful study

WILLIAM E MCCOLLUM

**Sex and Internal Secretions.** A Survey of Recent Research Second edition, edited by Edgar Allen Octavo of 1346 pages, illustrated Baltimore, Williams & Wilkins Co, 1939 Cloth, \$12

The first edition of this work appeared in 1932, it was universally hailed as an outstanding achievement in the field of endocrinology The past seven years, however, have contributed so much new material that a revision of the book seemed to be imperative The present second edition is considerably improved due to better coordination of some of the overlapping chapters and by the addition of several excellent new chapters

Section "A" on the biological basis of sex, including a thorough survey of the complex embryologic phenomena, is particularly valuable for those who are not sufficiently well grounded in the genetic aspects of these problems. Section "B" deals with the physiology of the sex organs and includes the especially authoritative chapter on the endocrine function of the ovaries written by Allen, Hisaw, and Gardner Section "C" deals with the biochemical aspects of sex hormones and is a welcome review of this important subject which somewhat exceeds the scope of the limited chemical knowledge of the average physician Section "D" is devoted to discussion of the pituitary and its relation to the reproductive system The various chapters are written by such authorities as P E Smith O Riddle, and others whose research constitutes the basis of our knowledge on this subject The last section deals with additional factors in sex functions, including an important chapter on vitamins and, as a conclusion, J P Pratt's considerably enlarged chapter on the clinical relationship between glandular function and manifestations in the sex sphere of man

The second edition of *Sex and Internal Secretions* is a book that no research worker in the field can miss and that every physician should consult to obtain authoritative information on the problems of sex

MAX A GOLDBERGER

**Medical Leaves, 1939** A Symposium on Jewish Medical Problems Dr Abraham Levinson, Editor-in-Chief Quarto of 198 pages, Chicago, Medical Leaves Inc, 1939 Cloth

This volume is the 1939 issue of a publication devoted to historical and contemporary aspects of Jewish medical problems It contains interesting and valuable studies on Jewish medical

**Iodine Metabolism and Thyroid Function** By A W Elmer, M D Octavo of 605 pages New York, Oxford University Press, 1938 Cloth, \$10

Recent advances in microchemical methods of the determination of iodine content in body fluids have enhanced our knowledge of iodine metabolism in health and disease. There is no doubt, that without the knowledge of iodine metabolism, our understanding of the function of the thyroid gland under physiologic and pathologic conditions would be very limited. Dr A. W. Elmer has contributed valuable research in this field.

This book deals with iodine as an essential constituent of the hormone of the thyroid gland and as an ion in body fluids and tissues. In the chapters on physiology and pathology of iodine metabolism, the results of investigations which merit recognition have been included, as well as the results (both published and unpublished) of the author and his associates.

The reviewer recommends this well-written book to the clinician and the laboratory worker because of the clarity with which the subject is treated. The clinician will be interested in the chapter on the differential diagnosis of the functional condition of the thyroid gland by means of iodine tests.

S J COHEN

**Clinical Biochemistry** By Abraham Cantarow, M D, and Max Trumper, Ph D Second edition Octavo of 666 pages Philadelphia, W B Saunders Co, 1939 Cloth, \$6 00

This book contains an excellent presentation of recent biochemical findings and concepts that are important in clinical medicine. The authors have arranged their material in textbook fashion. They discuss each problem in a clear and simplified manner and avoid controversial biochemical theories which might confuse the clinician. It is in this respect that the book successfully bridges the gap between textbooks of physiologic chemistry, which tend to be theoretical, and textbooks of laboratory medicine, which usually do not contain adequate biochemical background. For those who want a reference manual concerning research in clinical chemistry this book will not be sufficiently complete. Also, it does not attempt to give specific details concerning chemical methods that are used in various clinical tests. It presents to the physician, in excellent fashion, a discussion of the significant biochemical studies which have practical applications.

M B HANDELSMAN

**Clinical Studies in Psychopathology** A Contribution to the Aetiology of Neurotic Illness By Henry V Dicks, M D Octavo of 248 pages Baltimore, William Wood & Co, 1939 Cloth, \$4 75

This book covers a psychoanalytic study of the neuroses. The author cites numerous cases from his personal experience to illustrate his interpretations. He makes it quite clear that he is not a dyed-in-the-wool Freudian, but prefers to study the material elicited from his patients with a freedom to go as he pleases. He states in the preface that he has based his interpretations upon the principles of various schools of psychopathology

and that he does not claim to be original. His analytic discussions cover cases that we rarely see in institution practice. They include such neurotic manifestations as phobias and obsessional states and sexual dysfunction. Material elicited from cases cited gives the reader an illuminating view into some of the underlying psychologic processes of mental abnormalities.

A E SOPER

**Practice of Allergy** By Warren T Vaughan, M D Quarto of 1082 pages, illustrated St Louis, C V Mosby Co, 1939 Cloth, \$11 50

In this work the author wisely departs from his previous practice of writing books designed for both the physician and the patient. This large volume of more than one thousand pages is prepared primarily for the practitioner and student and is a marked improvement upon its predecessors.

The book is divided into sixteen parts, comprising, in all, eighty chapters. Almost every phase of the subject of allergy is covered. Although theoretical aspects of the subject are discussed, the practical considerations are stressed. Throughout the volume several hundreds of illustrations, charts, history forms, and tables aid the physician in the management of his cases.

The author presents fully the newer aspects of allergy. At times, however, he gives diagnostic and therapeutic procedures which are still in the experimental stage and are of doubtful value, far more space than they deserve. The sections on diagnostic methods, food allergies, and pollens are particularly well done. The subjects of fungi, bacterial, contact allergy, and physical allergy are given due consideration.

The author has thoroughly reviewed the recent literature on practically every phase of allergy, and the bibliography is therefore a large one. For a book of this size, however, the index is relatively small and hardly adequate.

This volume is undoubtedly one of the most complete of the recent textbooks on allergy and is to be recommended to the student and practitioner as a valuable aid to their approach of the subject.

MATTHEW WALZER

**Diseases of the Skin.** By Richard L Sutton, M D, and Richard L Sutton, Jr, M D Tenth edition. Quarto of 1,549 pages, illustrated St Louis, C. V. Mosby Co, 1939 Cloth \$15

In the preface to this edition the authors state that "few branches of medicine have made such progress in the past four years as has dermatology." To paraphrase this, we would say that probably never has any textbook, and surely no dermatological textbook, made such progress as has this one.

It would be impossible to tell how completely this book has been renovated. It is no more like its former self than Ringling Brothers circus at Madison Square Garden is like the old three-ring circus in the sticks, and we have always considered it a good book. Now it has undoubtedly assumed first place and is to dermatology what the unabridged dictionary is to the English language.

We have read many parts of it quite thoroughly and marvelled at its comprehensiveness.



**Manual of Toxicology** By Forrest R. Davison, M B Duodecimo of 241 pages New York, Paul B Hoeber, Inc, 1939 Cloth, \$2 50

This small book might properly be called "Manual of Clinical Toxicology" for it limits itself to the clinical aspects of poisoning, omitting the action and effects of drugs and poisons on animals. This fact makes the book desirable for the busy practitioner and hospital physician who may want the salient points in a given case of suspected drug poisoning. This manual should be at the elbow of any physician who prescribes drugs, so that he may bear in mind at all times the hazards that lurk in the use of our best remedies.

CHARLES SOLOMON

**The Canned Food Reference Manual** Octavo of 242 pages, illustrated New York, American Can Co, 1939 Cloth

The story leading up to this publication recently compiled by the Nutrition Laboratory, Research Department of the American Can Company, is an intensely interesting one. It was brought about through the realization that not only must reliable information on canned foods be made available to laymen but—equally important—more technical information on this great class of foods should be provided for those professions which deal intimately with canned foods.

**Fever and Psychoses** A Study of the Literature and Current Opinion on the Effects of Fever on Certain Psychoses and Epilepsy By Gladys C Terry Octavo of 167 pages New York, Paul B Hoeber, Inc, 1939 Cloth, \$3 00

The book is an effort to report and evaluate the effect of intercurrent natural fevers on the functional psychoses and epilepsy. The author cites 446 case reports from the literature, 314 of which were functional psychoses and 132 of epilepsy. The unpublished observations of 301 investigators and clinicians in current psychiatry are given respecting the effect on the affective and schizophrenic psychoses and epilepsy. The author reviews the clinical use of artificially induced fevers and discusses their therapeutic implications. The last paragraph may be quoted as a conclusion: "The wide divergence of expressed opinions is evidence in itself to the fact that the subject of febrile influences on the so-called functional psychoses is essentially a matter of speculation, largely determined by background and bias. Until studies definitely establish basic facts, obviously therapeutic implications are incapable of leading us to very helpful conclusions."

This book represents an immense amount of work, and the author deserves credit. It sets us right concerning a matter about which, in the minds of some, there might be some misconception.

A E SOPER

**Relation of Trauma to New Growths** Medico-Legal Aspects By R J Behan, M D Octavo of 425 pages Baltimore, Williams & Wilkins Co, 1939, Cloth, \$5 00

This work, by the author of another recently published book on cancer, is a complete and

scholarly study of the medicolegal aspects of the relationship of trauma and malignancy. Dr Behan gives adequate space to those opposed to the acceptance of the opinion that a causal relationship has been proved. At times, these opposing quotations and references interfere with the smoothness of the debate.

The subject is treated historically and according to single, multiple, and chronic trauma, and following chemical and other forms of irritation. According to Ewing, who is classed as a "leader among the antagonists of a single trauma as the causative factor in the production of cancer," "traumas reveal more malignant tumors than they cause." It is unfortunate that, at present, clinicians and pathologists seem to be on the opposite sides of the fence on the question. The author seems to have thrown the weight of his extensive and critical experience on the side of the "pros" but concedes the necessity of continued and intensive study of the problem. The question of the causal relationship of trauma and malignancy has become increasingly important and pertinent since the establishing of the principle of industrial compensation. Many cases are cited in which this relationship has been accepted in courts of law, in spite of contrary opinions by expert and other witnesses. This book, therefore, will be of value to the clinician, the expert, the lawyer, and to those who have to preside at trials in which this question is raised.

J RAPHAEL

**The Diabetic Life** Its Control by Diet and Insulin A Concise Practical Manual for Practitioners and Patients By R D Lawrence, M D Eleventh edition Octavo of 246 pages Philadelphia, P Blakiston's Son & Co, 1939 Cloth, \$3 00

The facts, that this small manual has gone into its eleventh edition since 1925 and has been translated into French, Spanish, Dutch, and Italian, speak for themselves in evaluating the work. The clinical picture of diabetes is well presented by a series of short chapters. The "Line-ration" diet scheme, a unit diet system, is described. The method is fairly flexible but has the disadvantage of calling for the weighing of foods, one more needless and burdensome procedure for the diabetic. With the modern tendency of higher carbohydrate diets, so commonly in vogue, "decimal-point" exactness of food portions is as useless as it may be meticulous. It has done more to discourage the diabetic patient from following prescribed diet than any other single factor. Common measures will accomplish far better adherence to diet.

The author has suggested that when insulin stings on administration it may be mixed with the sodium bicarbonate solution to neutralize the acidity. In the reviewer's opinion, this is not good advice. The Toronto insulin committee has prescribed definite hydrogen-ion concentration in the production of insulin, since variation in this direction influences the absorption of the product on injection. "Acidity" is one of the most pertinent factors in the slower absorption of protamine insulin.

In spite of these relatively minor points, the book is an excellent one and is to be recommended.

G E ANDERSON

# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

### Inflated Statistics

In his latest book, *Freedom and Culture*, Dr John Dewey comments on the failure of sociologists to apply scientific methods to the statement and solution of their problems "Judged by the methods of the natural sciences," he observes, "the procedure in the social field has been prescientific and antiscientific" This is nowhere more true than in the approach of lay welfare workers to the distributive problems of medical care

The advocates of the Wagner National Health Bill, for example, rest their case on the dark picture of the country's health supposed to have been revealed by the National Health Survey Without the "facts" adduced in this survey there would be no justification for the ambiguous and expensive Wagner bill Yet it has repeatedly been pointed out that the methods employed in this survey were faulty, the investigating personnel unskilled, and the resulting information inaccurate and unreliable

Here is a typical picture of lay welfare workers clinging to a particular remedy although the conditions it is supposed to cure have been proved to be nonexistent or present in a much slighter degree

Another example is the campaign against venereal disease No one will question the necessity or benefits of such a drive Yet here again the unreliability of social statisticians is evident

The American Social Hygiene Association has scared up large appropriations against venereal disease by a "survey" showing one person in every twenty, viz, 5 per cent of the population, infected with syphilis Yet, as Dr S Adolphus Knopf recently pointed out, serologic tests in New York City show a syphilis rate of  $1\frac{1}{4}$  per cent and the United States Public Health Service estimates the rate for the entire country to be about 1 per cent Premarital tests performed in New York City under the new state law have been  $1\frac{3}{8}$  per cent positive This is less than a third of the 5 per cent incidence alleged by the American Social Hygiene Association

Apparently the venereal disease survey of the American Social

We have tried to find unusual variations of disease undescribed but have failed. We have discovered references to literature so recent that we have wondered how they could have been included except in an addenda.

The photographic illustrations are unusually profuse and of excellent character. Classifications of diseases have been brought up to the minute. There are charts of dosage and technique of application of radium more complete than have ever been offered in a dermatologic text.

Without further comment let us say it is the finest dermatologic book we have ever reviewed and should be on the "must" list for every dermatologist.

E. ALMORE GAUVAIN

**Textbook of Nervous Diseases** By Robert Bing. Fifth edition. Quarto of 838 pages, illustrated. St. Louis: C. V. Mosby Co., 1939. Cloth, \$10.

Dr. Bing and his books are well known to the average American neurologist. The present volume is an American adaptation of Bing's *Lehrbuch der Nervenkrankheiten*. It contains the results of many years' experience of one of the world's foremost teachers in neurology and has been edited by a young and enthusiastic American neurologist. It is extensively revised in many places and is suited for teaching students in medical schools. The average physician may well use it as a reference text, and the neurologist will find it a convenient reference work. The subject is covered in thirty chapters to each of which there is added a list of references to the most original and comprehensive contributions to the subject under discussion. The psychoneuroses and the endocrine glands and their disorders receive adequate consideration by the author. It is a good book, and one that will receive a warm welcome by the progressive physician.

IRVING J. SANDS

**Experimental Pharmacology and Materia Medica.** By Dennis E. Jackson, M.D. Second edition. Octavo of 906 pages, illustrated. St. Louis: C. V. Mosby Co., 1939. Cloth, \$10.

This splendid work has been out of print for twenty years. Those of us fortunate enough to have the first edition welcome the second. Teachers of experimental pharmacology in our medical schools will find this book indispensable as a reference. In most of our colleges, students are given mimeographed outlines of the course which take the place of a textbook.

Practicing physicians who are careful in their choice of drugs might do well to have a copy of this book available. It will reacquaint them with the methods of experimental pharmacology used to determine the action and effects of drugs. A better knowledge of such procedures would make the practitioner more critical of the claims made for drugs recommended for the treatment of disease.

The section on prescription writing could have been made more practical by the selection of more extemporaneous prescriptions rather than those that come already prepared.

CHARLES SOLOMON

**Eye, Ear, Nose and Throat Manual for Nurses.** By Roy H. Parkinson, M.D. Fourth edition. Octavo of 243 pages, illustrated. St. Louis: C. V. Mosby Co., 1939. Cloth, \$2.25.

The contents of this fourth edition have been somewhat enlarged in order to include more recent developments in this field. The illustrations, taken from photographs and schematic drawings, are clear and instructive. The subject material is recent and accurate. The chapter on Problems Met by the Public Health Nurse is comprehensive and essential to nurses in all fields. The book is written in standard textbook style with a quiz at the end of each chapter. Altogether, it is a useful book for any nurse to possess, whether for study or reference.

THOMAS B. WOOD

**Bergey's Manual of Determinative Bacteriology.** A Key for the Identification of Organisms of the Class Schizomycetes. By David H. Bergey, Robert S. Breed, E. G. D. Murray, and A. Parker Hitchens. Fifth edition. Octavo of 1,032 pages. Baltimore: Williams & Wilkins Co., 1939. Cloth, \$10.

This is the latest edition of the one volume absolutely essential to the bacteriologist in any field. It is the ultimate standard for classification and the only modern reference work of its scope. This revision has almost doubled its size since the 1934 publication, the changes and amplifications characterizing the most signal advances of any previous edition. There are now descriptions of 1,335 species and references to over five thousand origins. New generic names, newly recognized families and an order, new rearrangements, all reflect the interested capability of the new board of editor-trustees made necessary by Professor Bergey's death. To his vision and industry in development of systematic bacteriology this volume is indeed a tribute.

IRVING M. DERBY

**Surgical Anatomy.** By C. Latimer Callander, M.D. Second edition, entirely reset. Quarto of 858 pages, illustrated. Philadelphia: W. B. Saunders Co., 1939. Cloth, \$10.

The second edition of this work, first brought out in 1933, has been completely reset and contains 254 fewer pages than the previous edition. The illustrations have also been decreased by 461. These changes have in no way affected the value of the book. The new edition contains much rewritten matter and includes more text and illustrations on the sympathetic nervous system, particularly ganglionectomy and presacral nerve. Although the number of illustrations is less there have been added at least one hundred new and, in most instances, original figures. All of these serve to bring the volume up to date and represent a lot of work which should rank this book one of the best on the subject. If surgical anatomy is taught in the last two years of the medical course it should be an excellent text book, but we believe, it contains too much surgery for the freshman or sophomore student to appreciate at that period of his medical course. We recommend this book most highly for both the young and the older surgeon.

HERBERT T. WIKLE

The Legislature had previously rejected compulsory health insurance. It is unlikely that it would have passed the Goldberg bill had it realized that this also is compulsory health insurance under an incognito.

Apparently the friends of obligatory prepayment have doubts as to its acceptability to the American public. Otherwise they would not try to bring it in as a legislative stowaway.

In any event, the Goldberg bill went before the Governor for final decision. Governor Lehman has vetoed the bill, and the question is settled for this year. If this state ever adopts obligatory prepayment for sickness, it should do so directly and with a full realization of what it is undertaking.

### The B<sub>2</sub> Complex

In the field of the vitamins, the B<sub>2</sub> complex remains an outstanding challenge to scientists. The fact that the term "complex" still is applied to the B group is sufficient evidence that its complexities have not as yet been clarified. Nevertheless, in the routine practice of medicine, it generally is not realized that the ramifications of this group of vitamins are so widespread in their effects on human metabolism that only the surface has been scratched, and it is all too frequent that vitamin B therapy is prescribed with no regard to the action of its various components. This is largely the result of the grouping of the B factors under the term "vitamin B," even though there is no chemical relationship among them and their physiologic actions are different. Quoting Dameshek and Myerson<sup>1</sup> "the situation in regard to recognition and purification of the various factors of the B<sub>2</sub> complex shows such rapid change that a publication of even a year ago is now outdated."

B<sub>1</sub>, or thiamin chloride, has been isolated in pure form and its antiberiberi effect definitely established. Riboflavin, or lactoflavin, commonly known as vitamin B<sub>2</sub>, has been chemically identified and constitutes an important component in the oxygen reduction mechanism of the body cells. Its deficiency in the body may result in an erosion of the mucous membrane and a cracking of the squamous epithelium at the corners of the mouth,<sup>2</sup> and in experimental animals its deficiency will cause growth disturbances, yellow liver, and cataract. Deficiency of the nicotinic acid in this B group has been established as the main cause of pellagra,<sup>3</sup> and its chemical formula is also established. But of the other factors in the complex, B<sub>3</sub>, B<sub>4</sub>, B<sub>5</sub>, and B<sub>6</sub> identified by Gyorgy,<sup>4</sup> and the filtrate and W

<sup>1</sup> Dameshek, W. and Myerson, P. G. *Am. J. M. Sc.* 199: 518 (Apr.) 1940.

<sup>2</sup> Sebrell, W. H. and Butler, R. E. *Pub. Health Rep.* 53: 2252 (1938).

<sup>3</sup> Spies, T. D. *Lancet* 1: 252 (1938).

<sup>4</sup> Gyorgy, P. *Nature* 133: 498 (1934).

Hygiene Association has much in common with the National Health Survey on which the Wagner bill is based. In both, the underlying idea is to "magnify the urgency of the problem" in order to frighten the public into a desired course of action.

The *New York Times* asks some pertinent questions about the current penchant for statistical inflation. "In the final account does it get us on faster to paint an economic system in the darkest colors, to exaggerate the number and plight of its victims, to minimize its achievements? it may be that people get frightened into a certain course of action. But in the longer test of time is man to shape his destiny by fear or by realities?" These questions are directly applicable to the campaign for state medicine and the "inflated figures" of untreated sickness on which it rests.

### The Legislative Record

For the most part the 1940 Legislature displayed courage and discrimination in its treatment of medical legislation. In the face of strong sectarian pressure it defeated both the chiropractic and physiotherapy bills. It passed the Mahoney-Mailler Act making a year's internship obligatory in this state. It also enacted two measures, endorsed by the profession, permitting qualified practitioners from outside the state to be licensed without examination and authorizing graduates of acceptable schools elsewhere to practice in hospitals here. This legislation is designed to bar physicians from sections with less stringent educational requirements from internships and practice in New York State. It is hoped the Governor will take favorable action on it.

Two apparent concessions to antimedical groups seem to have been the result of misunderstanding. Both failed to bear fruit. One—the passage of the Mahoney physiotherapy bill in the Senate—was nullified by defeat of the companion Assembly measure. There is little doubt that this bill succeeded in obtaining Senate support because it was reported to have the backing of the State Department of Education. Following a state-wide outburst of indignation over the department's alleged endorsement of a measure inimical to the Medical Practice Act, the Commissioner of Education and his colleagues repudiated the Mahoney-Goldberg bill. Meantime the good sense of the Assembly Rules Committee had already killed it. Defeat of the deserving radiology bill in committee appears to have been due, at least in part, to confusion over its relationship to the physiotherapy measure.

Passage of another Goldberg bill, insinuating a health insurance feature into the State Unemployment Insurance Act, seems to be another case of failure to recognize the full implications of a measure.

Tillet also calls attention to Glaubach's<sup>3</sup> observations that the anesthetic effects of papaverine are so augmented by sulfapyridine that a dose which ordinarily would produce a transient narcotic effect will result in deep narcosis, and sometimes death

Thus the "town hall" medical society, in affording the practitioner ready access to the world's literature on every aspect of medicine in its successive meetings throughout the year, has done yeoman's work in the advance of the public health. As far as the sulfonamide derivatives are concerned, may we modestly suggest that each county society for the present devote at least one program a year to record the merits and demerits of this precocious infant of pharmacology

<sup>3</sup> Glaubach S. Proc. Soc. Exper. Biol. & Med. 42: 325 (1939)

## Current Comment

"There are many who believe that the question which history presents to us is the question whether our existing economic system can be changed over into a workable and socially effective system without authoritarian forms of government"—Archibald MacLeish, librarian of Congress, writing in *Life*

. . .

"These millions of unemployed men and women are ready subjects to the wiles of the demagogues who actually desire to undermine and destroy our democratic institutions. No better national defense can be built than one that encompasses the re-employment of the ten million unemployed"—Philip Murray, chairman, Steel Workers Organization Committee, in a radio address on "Unemployment, the Root of America's Economic Ills"

"Through propaganda, socialized medicine, particularly in the form of federalized medicine, has been made to appear a likely political issue in the United States. Your overwhelming rejection of it should have the effect of making socialized medicine a dead political issue. When you vote refusal to cooperate with a federally controlled and administered program of socialized medicine, that program becomes on the face of it impossible. So

long as you do not break ranks, no national legislation tending toward the drastic curtailment of the private practice of medicine has a chance of being sponsored—much less being passed—by responsible political leaders"—This is the undeniable situation, according to the editors of *Modern Medicine* in the March issue of that publication

. . .

"Like many glittering theories that have from time to time gripped public imagination, socialized medicine is impractical in the United States. The reason is quite simple. Doctors, convinced that it would be inimical to public health, will not cooperate. It is but ignoring realities to believe the best possible spread of adequate medical attention has been obtained. Leaders in the medical profession recognize this themselves and are working to remedy conditions. Nothing could be more reasonable than to assume they are most able to meet and solve this problem. Certainly it would be a gross mistake to permit government intervention that would hobble the profession, destroy its initiative, merchandise its humanitarian service, and lower standards of health ministrations. More than that, socialized medicine can't work because doctors will not tolerate it."—From the *St. Louis Globe-Democrat* recently

factors, but little is known. Besides these, others that may or may not have a vitamin activity, factors such as choline and the gray-hair preventive factor of Lunde and Kringstad are as yet undetermined in regard to their need and their therapeutic value.

For the clinician, therefore, it would seem that, for the present at least, treatment of vitamin B deficiencies would be best carried out by giving the patient the entire B complex, instead of only the known factors whose potency has more or less been determined. These latter can be added in the required amounts.

### Sulfonamide Symposiums, Their Importance

The extent to which data have accumulated concerning the effects of the sulfonamide compounds is so considerable that it is almost impossible for any one physician to acquaint himself minutely with the numerous publications on the subject. So many branches of medicine are involved in this form of chemotherapy that articles are found concerning their therapeutic and toxic effects in virtually every issue of every medical periodical in all general and special fields. Obviously to read all these is not possible, except for one who can spend his entire time in a well-stocked library. Therefore the symposiums that county and other local medical societies conduct on this subject are becoming increasingly important to the practitioner, for here he can obtain, in one evening, a mature digest of the progress in this relatively new phase of chemotherapy.

For instance, at the annual meeting of the New York Academy of Medicine in January, 1940, the addresses of Blake, of Plummer, and of Tillet<sup>1</sup> afforded the audience a well-edited résumé of the status, to date, of the sulfonamides. All left the meeting with problems solved, hearsay refuted or substantiated, and new (to the hearer) observations destined to serve them in the everyday practice of medicine. To take only one point as an example, while all knew that it is inadvisable to combine the sulfonamides with other drugs, how many were aware that Adriani<sup>2</sup> showed that barbiturates administered to animals who had had sulfonamide died whereas the controls did not? The clinical significance of this is readily apparent, many patients require surgery after a course of sulfonamide therapy, and the "routine" preparation for operation may call for the administration of amytal, nembutal, or some other like product. "Furthermore, an amount of barbiturates which induced only sub-anesthetic states in normal rats, caused deep anesthesia and, in some instances, death in animals receiving sulfanilamide. The implications of these findings concerning the selection of the type of anesthetic in surgical patients receiving sulfanilamide is obvious."

<sup>1</sup> Papers of Blake, F. G. Plummer, N. and Tillet W. S. Bull. New York Acad. Med. 16 No. 4 (Apr.) 1940  
<sup>2</sup> Adriani, J. J. Lab. & Clin. Med. 24 1066 (1939)

## CESAREAN SECTION

A Ten-Year Study Conducted in Rochester and Monroe County by the Committee on Maternal Welfare of the Medical Society of the County of Monroe

JAMES K. QUIGLEY, M D, F A C S, Rochester, New York

THE operation of cesarean section has been criticized in many maternal mortality surveys for two reasons first, that too many sections were being done, in other words the indications in many cases were unwarranted, and second, that the mortality rates in area studies were unnecessarily high. It seemed, therefore, that it might not only be of interest but also of value to find what the situation is locally and to compare it with similar studies elsewhere, and it seemed fitting that this study should be made by a group interested in maternal welfare. The material here presented includes all cesarean sections performed in all the hospitals of the city and the county infirmary for ten years and was conducted by the Committee on Maternal Welfare of the County of Monroe.

### Incidence

The proportions of operations to total deliveries in seven hospitals varied from 1 in 29 to 1 in 94 (the average for all hospitals was 1 in 40, or 2.48 per cent). A fairer consideration of proportion, however, would be the number of operations to all births in the county, which was 1 in 68 or 1.46 per cent. In the Cleveland area the hospital incidence was 1 to 44, of total births 1 to 90, in the Detroit study the hospital incidence was 1 to 73, of total births 1 to 167, and in the Philadelphia study the hospital incidence was 1 to 41, of total births 1 to 61. It will be noted from this that the proportion of cesarean sections done upon hospital patients is about the same for Cleveland, Philadelphia, and Rochester.

There is a tremendous increase over the frequency of abdominal delivery done twenty-five years ago. However, I think

TABLE 1—STATISTICS ON CESAREAN SECTION—ROCHESTER AND MONROE COUNTY

Hospital	Total Deliveries	No Cesareans	Incidence
A	7,554	140	1 in 55 or 1.86%
B	3,135	81	1 in 37 or 2.58%
C	5,930	116	1 in 51 or 1.90%
D	4,762	116	1 in 40 or 2.44%
E	10,610	358	1 in 29 or 3.30%
F	4,745	117	1 in 40 or 2.46%
G	849	9	1 in 94 or 1.06%
Total	37,575	937	1 in 40 or 2.48%
Total births in county	63,950	937	1 in 68 or 1.46%
		Hospital Incidence	Proportion to Total Births
Cleveland		1 to 44	1 to 90
Detroit		1 to 73	1 to 167
Philadelphia		1 to 41	1 to 61

it is generally agreed that the broadening of the indications for this operation from the sole indication of markedly contracted pelvis is justified, although any study of the indications as given in the records would lead one to the conclusion that many of the reasons are quite far drawn and that the list of indications today is too long.

### Indications

Contracted pelvis of all forms was the indication offered in four-ninths of the cases, this diagnosis or indication was not always substantiated by a perusal of the pelvic measurements, however. In many of the records where contracted pelvis was given as the indication, very meager pelvimetric findings were recorded. The estimated diagonal conjugate was often conspicuous by its absence.

Previous cesarean section as an indication means that this is the sole reason for operating and that the reason for the previous section or sections did not obtain at the time of the operation under discussion such as contracted pelvis, over 10 per cent of the total number were operated on



## Annual Meeting—1940

### Headquarters

## THE WALDORF-ASTORIA

Park Avenue at 50th Street  
New York City

**T**HROUGHOUT the meeting May 6-9, 1940, the Waldorf-Astoria will house all the meetings

Members planning to attend the annual meeting are particularly urged to make their stay at this, the headquarters hotel, thus to make all the sessions carry through more promptly and smoothly. In this way, also, the registrants will save themselves valuable time between sessions.

*The Waldorf-Astoria* has set a special rate for its rooms for all registrants concerned with the meeting, the members and their families, and the exhibitors.

Single rooms with bath can be rented at \$6 00 to \$8 00, double rooms with bath at \$9 00 to \$11. The Hotel has agreed to carry these rates over for those who wish to continue their stay after the close of the meeting.

On Sunday evening, the "official family" of the Society will attend a "Get Together" dinner on invitation of the Committee on Arrangements.

*The House of Delegates* will be in session in the Ballroom from Monday morning at 10 00 through the afternoon and evening and Tuesday morning.

*General Sessions* will be held on Tuesday and Thursday afternoons in the Ballroom.

*Section and Session meetings* will begin Tuesday morning with second sessions Wednesday afternoon. The meetings beginning Wednesday morning carry on through Thursday morning. All the rooms will be in use, most of them on the fourth floor, with the Empire and Sert rooms on the Park Avenue ground floor and the Ballroom on the third floor.

*The Women's Auxiliary to the State Society* will hold its meetings on the fourth floor on Monday, Tuesday, and Wednesday.

*The Women's Medical Society of the State of New York* will also have its Annual Convention in the Waldorf in the Perroquet Suite on Monday.

Those in charge of the meeting earnestly request all who attend, members and guests, to REGISTER in the Silver Corridor when they first enter. Badges this year will be required for admission to all sessions. There is no charge for registration.

Hotel reservations should be made at once, by mail, directly to

MR. JOSEPH BOLLING, *Office Manager*  
Hotel Waldorf-Astoria  
Park Avenue at 50th Street  
New York City

This total of 147 in hospital E represented 75 per cent of all the low cervical sections done in all the hospitals. There were 23 sections followed by hysterectomy, the Porro operation (2 1/4 per cent)

TABLE 4—MATERNAL MORBIDITY

Hospital	No of Cases	Rate (Percentage)
A	50	35
B	41	30
C	45	38
D	58	54
E	124	34
F	42	35
G	4	44
Total	364	38

The index used is that of the American Committee on Maternal Welfare viz a temperature of 100.2 F on two successive days not including the day of operation

A general morbidity rate of 38 per cent under the index followed is not high, while it may, and often does, mean uterine infection, it does not necessarily signify pelvic sepsis, it includes many extrapelvic causes such as breast engorgement, urinary infection, etc. While, as will be shown later, the mortality rate for the entire series is low all things considered, nevertheless many of these patients had stormy postoperative courses

TABLE 5—MATERNAL MORTALITY

Hospitals	Cesareans	Deaths	Rate (Percentage)
A	140	3	2.1
B	81	6	7.4
C	116	3	2.5
D	117	6	5.1
E	358	4	1.1
F	117	5	4.2
G	9	1	11.0
Total	937	28	2.9

TABLE 6—COMPARISON WITH SIMILAR SURVEYS

City	No Cesareans	Deaths	Rate (Percentage)
Cleveland	1,047	75	7.15
Brooklyn	1,805	128	7.0
Los Angeles (small hospitals omitted)	1,550	73	5.1
Philadelphia	573	39	6.8
Detroit—1921	154	20	13.0
Detroit—1930	203	9	4.43
Rochester	937	28	2.9

While a gross mortality rate of 2.9 per cent for 937 cesarean sections done in seven hospitals, large and small, is low as compared with the results in other cities, nevertheless our analysis of the 28 deaths shows that it might have been even lower

Included in this survey were 264 operations done in the private patient department of one hospital with 1 death and that from pulmonary embolus on the thirteenth day postpartum—a mortality rate of 0.37 per cent.

TABLE 7—MORTALITY OF TYPES OF OPERATION

Type of Operation	No Cases	Deaths	Rate (Percentage)
Classic	718	24	3.34
Laparotrachelotomy	196	2	1.02
Porro	23	2	8.69

COMPARISON WITH SIMILAR SURVEYS

Philadelphia			
Classic	458	31	6.7
Laparotrachelotomy	103	4	3.8
Porro	10	4	40.0
Detroit 1930			
Classic	105	8	7.61
Laparotrachelotomy	87	0	0
Porro	11	1	9.0
Cleveland			
Classic	827	63	7.6
Laparotrachelotomy	108	3	2.8
Collected series			
Classic	2,242	159	7.0
Laparotrachelotomy	1,287	26	2.02

TABLE 8—CAUSES OF DEATH

Pertinitis	7 deaths or 25% of total
Pulmonary embolus	5 deaths or 17% of total
Abruptio placentae	3 deaths or 10% of total
Heart disease	3 deaths or 10% of total
Eclampsia	2 deaths or 7% of total
Pre-eclamptic toxemia	1 death or 3% of total
Thrombosis iliac vein	1 death or 3% of total
Spinal anesthesia	1 death or 3% of total
Hemorrhage and shock	1 death or 3% of total
Carcinoma	1 death or 3% of total
Lobar pneumonia	1 death or 3% of total
Bronchopneumonia	1 death or 3% of total
Chronic nephritis	1 death or 3% of total

One cannot escape the conviction that the mortality rate for the low cervical cesarean section or laparotrachelotomy is one-half or even less than one-half that of the classic operation—it must, therefore, be safer and should be more generally adopted. In addition to many other advantages there is notably less liability for rupture of the uterus in subsequent pregnancies.

In connection with this I wish to quote first from Skeel and Jordan, of Cleveland. "In our series the low or cervical operation gives a definitely lower mortality rate than does the classic. We advise its use in all potentially infected cases. In those with definite sepsis the Porro should be considered." Secondly, I quote from Seeley, of Detroit. "The low cervical cesarean section should replace the classic as the operation of choice in the majority

TABLE 2—INDICATIONS FOR OPERATIONS—SEVEN HOSPITALS—TEN YEARS

	A	B	C	D	F	F	G	Total
Contracted pelvis all forms	64	38	32	40	168	61	2	414
Previous cesarean section	13	14	8	14	41	6	1	97
Placenta previa	13	13	2	10	21	11	1	71
Ablatio placentae	8	2	6	8	9	7	2	42
Eclampsia	0	2	0	1	3	2	0	8
Pre eclamptic and nephritic toxemia	0	0	10	4	21	1	0	36
Fibromyoma of uterus	5	2	7	2	9	0	1	26
Cardiac disease	5	1	15	4	14	3	0	42
Pulmonary tuberculosis	0	1	17	3	12	1	2	36
Chronic nephritis	3	0	0	0	5	0	0	8
Pyelitis	0	1	1	0	0	0	0	2
Elderly primiparity	2	0	4	0	8	7	0	21
Disproportion	4	3	2	0	15	5	0	29
After repair pelvic floor following dystocia with previous labors and stillbirths	0	5	0	0	2	9	0	16
After amputation cervix	0	2	2	0	2	0	0	6
Stenosis of cervix	0	0	0	0	2	0	0	2
Carcinoma of cervix	0	0	0	0	1	0	0	1
Cervical dystocia	0	0	2	5	0	0	0	7
Trial labor	4	0	0	0	0	0	0	4
Uterine inertia	0	1	3	0	0	0	0	4
Contraction ring dystocia	0	0	0	0	3	0	0	3
Double uterus	0	0	0	0	2	0	0	2
Atresia or stenosis of vagina	1	0	0	0	1	0	0	2
Fractured pelvis	0	0	0	2	1	0	0	3
Demand of patient	2	0	0	0	0	0	0	2
Malpresentation breech face transverse brow	5	1	1	0	1	1	0	9
Unclassified	6	0	0	12	2	0	0	20
Miscellaneous	5	0	4	2	10	3	0	24

TABLE 3—TYPE OF OPERATION—ROCHESTER AND MONROE COUNTY

Hospital	Classical Cesarean Section	Laparo- trachelotomy or Low Cervical	Porro's Operation	Post mortem
A	132	7	1	0
B	65	14	1	1
C	88	14	14	0
D	107	6	3	1
E	209	147	2	0
F	112	4	1	0
G	4	4	1	0
Total	717 or 76.5%	196 or 20.9%	23 or 2.4%	2

Elective done before the onset of labor—588

In labor done often after trial labor—349

The average length of these labors was 21 hours. The longest labors in the seven hospitals were 72 106 85 168, 96 and 96 hours respectively

solely for this reason, and this is too high. The hemorrhagic states, ablatio, and placenta previa accounted for another 10 per cent.

Fortunately, there were only 8 cases of eclampsia delivered by cesarean section, for this is not an approved method of handling this disease, although some cases of pre-eclamptic toxemia, such as in the elderly primipara, are best delivered by this operation.

Observations by Dr. Lloyd have shown that during labor there is a marked increase in intrathoracic pressure, this may explain why cases of pulmonary tuberculosis that have done well during pregnancy pursue a downward course after delivery, and that delivery by elective cesarean section may obviate this. There

were 36 cases of tuberculosis so treated in this series, many of these were sterilized at the time of section. The pregnant woman with decompensated heart disease is often best delivered by cesarean section under local anesthetic.

Included in the group of "all other indications" were obstructive causes other than pelvic deformity such as fibroid, ovarian cysts blocking the pelvis, carcinoma of the cervix, and stenosis of the cervix following amputation.

Indications given by operators that might tend to support the contention that this operation is performed too often were demand of the patient, rigidity of the cervix, uterine inertia, and arrested labor. All of these conditions are ordinarily handled without resort to abdominal delivery.

*Type of Operation*—Seven hundred and seventeen were of the so-called classical type with no attempt to extraperitonealize the uterine incision (76.5 per cent). One hundred and ninety-six were laparotomies—the low cervical operation with either single or double overlying of the peritoneum over the uterine incision (20.9 per cent). In only one hospital (E) was this operation preferred in a significant proportion of the cases. In this institution 147 or 41 per cent of the total sections done were laparotomies.

or 26 per cent mortality. The time elapsing between rupture and operation in 2 of the 4 cases was between thirty and forty hours, in the other 2 about fifteen hours.

**Vaginal Examination**—In 156 cases vaginal examinations were made before the patient was operated upon. Death occurred in 4 of these cases giving a mortality rate of 2.5 per cent. Other vaginal manipulation occurred in 4 of these cases, such as attempted forceps delivery and packing the vagina in 1 case of placenta previa.

There were 8 deaths from spreading peritonitis, in only 1 had any vaginal examinations been made. Five had been in labor for periods varying from six to fifty-three hours, and in 3 the membranes had ruptured fifteen, thirty-four, and thirty-six hours before the operation.

TABLE 12—FETAL MORTALITY

<b>Stillbirths</b>	
Those unpreventable	
Abruptio placentae in mother	26
Monster	1
Placenta previa	6
Cerebral hemorrhage	3
Atelectasis	1
Maternal cardiac	1
Unknown	5
	43
<b>Neonatal Deaths</b>	
Those unpreventable	
Monster	8
Mongolian idiocy	1
Hydrocephalus	1
Congenital absence of esophagus	1
Congenital heart	1
Prematurity	12
Maternal toxemia	3
Atelectasis	2
Asphyxia	2
Pneumonia	4
Cerebral hemorrhage	2
Thymus	2
Icterus	2
Toxemia mother	3
Scattering and unknown	7
	50

Gross fetal mortality rate is 9.9 per cent.  
Deducting unpreventables (39) the rate is 5.7 per cent.

## Conclusions

1 The frequency to which cesarean section is resorted in this community is about that of other cities reporting. There is not a marked variation between the seven hospitals here investigated.

2 The indications for operation as given were many. Some, as contracted pelvis, were not substantiated by the physical examination. Some other indi-

cations were quite tenuous, such as "desire of patient," uterine inertia, etc., and did not demand operation.

3 The maternal mortality varied markedly in the seven hospitals from 1.1 per cent to 11 per cent. The rate of 2.9 per cent for all the hospitals is far below that of other studies made on a city-wide basis. The maternal morbidity rate is not high. The death rate for the low cervical cesarean section is much less than that for the classic operation. This coincides with many other surveys and would indicate that this technic should be employed for all cases in labor but that it does not compete with the Porro section or craniotomy in cases that are infected.

4 Cesarean section is often performed in the interest of the child. In considering this as an indication, the general infant mortality rate of the operation should be taken into account, for a gross rate of approximately 10 per cent or even a corrected rate of 5.7 per cent is not to be dismissed lightly.

26 South Goodman Street

## Discussion

Dr Edward P. McDonald, Albany, New York—The paper by Dr James K. Quigley deserves careful study and merits definite consideration of obstetricians and gynecologists alike. It is an added plea for conservatism with regard to cesarean section. It is timely and comes to us during a sort of transitional period when the tendency is to broaden the indications for surgical delivery by the abdominal route—not always based on good judgment certainly, but too often based upon "excuses" rather than upon true indications for the procedure.

I am firmly convinced that many patients, subjected to cesarean section today, would be far better off and more wisely handled by conservative obstetric measures. If cesarean section carried with it a negligible mortality, if it were not followed only too frequently by immediate and remote complications, if a section decided upon by one whose judgment is poor did not place the patient in a position for almost certain cesarean section with subsequent pregnancies the problem would not be so serious.

I know of no way to lessen the great number of needless cesarean sections, except by intelligent supervision on the part of obstetricians heading hospital departments and the drastic enforcement of regulations set up by such de-

TABLE 9—FATALITIES

Type of Operation	Indication	Hours in Labor	Vaginal Exam	Membranes	Cause of Death
1 Classic	Abruptio	None	None	Intact	Shock and hemorrhage
2 Classic	Heart disease	None	None	Intact	Heart disease
3 Classic	Contracted pelvis	14	None	Intact	Lobar pneumonia
4 Classic	Uterine dystocia	19	None	15 hours	General peritonitis—8th day
5 Classic	Previous stillbirth	6	None	Intact	General peritonitis—6th day
6 Classic	Abruptio	None	None	Intact	Postpartum hem.—3 hours
7 Classic	Heart disease	None	None	Intact	Spinal anes cesarean done post mortem
8 Classic	Placenta previa	None	None	Intact	Pulmonary embolus—8th day
9 Classic	Placenta previa	None	None	Intact	General peritonitis
10 Classic	Toxemia preg	None	None	Intact	Pulmonary embolus—38th day
11 Classic	Toxemia and heart disease	None	None	Intact	Pulmonary embolus—2nd day
12 Classic	Heart disease	None	None	Intact	Cardiac death—36th day
13 Classic	Abruptio	22	1	?	Shock and hemorrhage—5 hours
14 Classic	Contracted pelvis	14	None	Intact	Thrombosis iliac vein—18th day
15 Classic	Placenta previa	None	None	Intact	General peritonitis—5th day
16 Classic	Stenosis cervix	36	4	Intact	Toxemia pregnancy
17 Classic	Pre-eclamptic toxemia	None	None	Intact	Eclampsia—16 hours
18 Classic	Breech elderly Pr	16	None	34 hours	General peritonitis—6th day
19 Porro	Cervical stenosis	1	1	33 hours	Hemorrhage—3 hours
20 Classic	Previous cesarean	None	None	Intact	Bowel adherent from previous section torn—peritonitis
21 Laparotrachelotomy	Contracted pelvis	53	None	Intact	General peritonitis
22 Laparotrachelotomy	Funnel pelvis	12	None	Intact	Pulmonary embolus—13th day
23 Classic	Maternal exhaustion	28	None	Intact	Carcinoma—68th day
24 Porro	Abruptio and toxemia	None	None	Intact	Eclampsia—7th day
25 Classic	Abruptio and toxemia	None	None	Intact	Chronic glomerulonephritis—13th day
26 Classic	Contracted pelvis	36	3	36 hours	Pentontitis—11th day
27 Classic	Heart disease	None	None	Intact	Cardiac death—8 hours
28 Classic	Abruptio and toxemia	None	None	Intact	Bronchopneumonia—4th day

TABLE 10—ANALYSIS OF THE DEATHS FROM GENERAL PERITONITIS

Indication	Vag Exam.	Membranes	Hours in Labor	Type of Operation	Private or Ward
4 Uterine dystocia	None	15 hours	19	Classic	Private
5 Previous stillbirth	None	Intact	6	Classic	Private
9 Placenta previa	None	Intact	None	Classic	Private
15 Placenta previa	None	Intact	None	Classic	Private
18 Breech elderly Pr	None	34 hours	16	Classic	Ward
20 Previous cesarean	None	Intact	None	Classic	Ward
21 Contracted pelvis	None	Intact	53	Laparotrachelotomy	Ward
26 Contracted pelvis	(Many per rectum) 3	36 hours	36	Classic	Ward

TABLE 11—MORTALITY OF VARIOUS CONDITIONS TREATED BY CESAREAN SECTION

Condition	No of Cesareans	Deaths	Percentage				
			Monroe Co and Rochester Rate	Phila Rate	Brooklyn Rate	Los Angeles Rate	Cleveland Rate
Abruptio	42	6	14.3	15.7	0	8	3
Placenta previa	71	3	4.2	7.1	7	6	5
Eclampsia	8	1	12.5	35.7	26	28	20
Heart disease	42	3	7.1				
Toxemia of pregnancy	36	3	8.3	10.3	6.6	6	4.5
Pulmonary tuberculosis	36	0	0				
Contracted pelvis	414	5	1.26				

Three abruptio cases died of hemorrhage and shock  
 1 of bronchopneumonia—4th day  
 Placenta previa—1 of pulmonary embolus—8th day  
 1 of eclampsia—7th day  
 1 of glomerulonephritis—13th day  
 2 of general peritonitis

of cases—yet it should be remembered that it should not compete with the Porro operation or with craniotomy "

Three factors affecting the prognosis in cesarean section done upon women in labor are (1) length of labor, (2) vaginal examination, if any, and number, and (3) whether membranes were ruptured, and if so, how long prior to section

**Length of Labor**—Three hundred and forty-nine cases were in labor for an aver-

age period of twenty-one hours with 12 deaths—a mortality rate of 3.4 per cent. Five hundred and eighty-eight cases were elective operations done before the onset of labor with 16 deaths—a mortality rate of 2.7 per cent.

**Ruptured Membranes**—In 155 cases the membranes were ruptured. The average time elapsing between the rupture and the operation was seventeen and seven-tenths hours. There were 4 deaths in this group

# THE ROLE OF INFECTION IN SUDDEN DEATH

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WE HAVE become increasingly impressed in the last few years with the role of infection in the etiology of sudden death. Studies of the clinicopathologic material at the New York City Hospital, Welfare Island, during the past twelve years reveal a surprisingly large number of sudden fatalities that can be proved anatomically to be the result of an infectious process. It has been the teaching over a long period that arteriosclerosis is the dominating factor in such accidents, and the medical profession has generally accepted this *in toto*. Our experience, however, leads us to believe that this is in error and that only a small percentage can be attributed to sclerotic changes per se.

Lisa<sup>1</sup> in 1939 reported a survey of 40 cases of sudden cardiac deaths that came to autopsy. He was able to show that, in his series, the chief etiologic factor producing cardiac changes was infection, whereas arteriosclerosis occurred as a main factor in a comparatively small number of cases. He stated that 14 of these were found to have infection in the myocardium, 12 exhibited toxic changes in the muscle, and there was presumptive evidence of a toxic factor producing myocardial changes in 6 others. Hence, 32 out of 40 or 80 per cent gave positive or suggestive evidence of the presence of infection in the lesion accountable for death. Acute endocarditis was found five times, acute rheumatic myocarditis four times, acquired syphilis twice. Two cases of combined syphilis and hypertension with a superimposed acute infectious endocarditis and 1 case of acute coronary insufficiency with bacterial emboli were found. In several instances more than one infectious factor was present in the same heart.

In the 12 cases that gave evidence of

toxic degeneration there were no bacteria found in the heart. The respiratory tract was by far the most common site for the infection in these cases. There were upper respiratory infections but they were mostly in children. In adults the lower respiratory area was the most frequently involved. Acute and chronic respiratory infections were present, and in the cases that showed the chronic condition most of the pathology was found in the lower lobes and was of the chronic tubular bronchiectatic type. Another important focus of infection was the G U tract with the syndrome called obstruction-infection by the G U surgeons. This was particularly noticeable in the male and to all intents and purposes could be considered a chronic pelvic cellulitis.

Lisa and Hart,<sup>2</sup> in a larger group containing in addition noncardiac deaths, were likewise impressed with the importance of infection. They were able to show infection a direct cause in 3 of the 21 noncardiac cases, a reasonably certain reason in 2 more, and an accepted remote cause in another. The positive group consisted of a *Torula meningoencephalitis*, a massive tuberculous hemorrhage, and a ruptured aneurysm. The next group was made up of 2 cases of spontaneous rupture of the aorta, 1 associated with an acute myocarditis and the other with a septicopyemia. Although this condition is usually considered a toxic lesion, the findings in these 2 cases suggested the possibility of an infectious rather than a toxic etiology even though bacteria could not be demonstrated at the point of rupture.

In this report we are adding to our series 47 cases of sudden death that came to autopsy. These deaths occurred in the wards of the New York City Hos-

partments With this very thought in mind, the Albany Hospital recently adopted a ruling in its Department of Obstetrics and Gynecology making it impossible for any cesarean section to be performed in that institution without the attending physician first having obtained competent obstetric or gynecologic consultation

Improved technic and better training on the part of specialists has definitely lowered the operative mortality of cesarean section It is not, however, low enough to be done promiscuously, with any excuse offered as the reason There are true and specific indications for cesarean section—let us abide by them!

I am interested in the apparent swing toward the low-flap operation and its relatively lower mortality than that in the classic procedure, despite the fact that the former is used by many only in cases of potential infection It would seem that if it is a safer procedure in the possibly infected case, it most certainly should be a safer procedure in the clean, elective case I question if the reason for the continued popularity of the classic operation is not found in the fact that it is easier to perform and requires less knowledge of pelvic anatomy and less operative skill

It is interesting to note that in Dr Quigley's hospital "E" 41 per cent of the total sections were laparotrachelotomies with a maternal mortality of 1.1 per cent—the lowest in any of the seven hospitals he studied Frankly, the tend-

ency in Albany is and has been toward the classic procedure I am convinced, however, that this attitude will soon change in the face of the increasing statistics that show a lower mortality, less chance of postoperative complications, and a better scar in a safer portion of the uterus, as offered by the low-flap operation

The incidence of cesarean section in Monroe County (1 in 40) is not relatively high when compared with many other cities For example, a maternity hospital in New York City reports 1 in 36, a Boston hospital 1 in 12, and a Buffalo hospital 1 in 14

In the Albany Hospital, over a period of ten years, from 1929 to 1938, inclusive, there were 7,228 deliveries, 158 cesarean sections with an incident of 2.18 per cent There were 4 deaths following cesarean section, giving an operative mortality of 2.53 per cent One of the 4 cases that ended fatally was a young woman who sustained a fractured skull in an accident, and upon whom a cesarean was done at the time of her death Living twins were delivered

Our future procedures will and must be guided by such excellent studies as the one Dr Quigley undertook and presented to us He might well be proud of his co-workers and their operative mortality of 2.9 per cent It speaks well for their judgment and operative ability and proves that conservatism still reigns in Monroe County And, as always, it pays good dividends

## ILLEGAL PRACTICE

Two years ago, in order to cope more effectively with the numerous complaints received by the New York County Medical Society almost daily, the Special Committee on Illegal Practice of Medicine was brought into being They have done, in spite of handicaps, an excellent and constructive piece of work, we are told in a report published in the *New York Medical Week* This new committee has been more realistic than most new committees of its kind They recognize the hopelessness of obtaining strict enforcement of the law with the present inadequate legal facilities They appreciate that neither the county society nor the parent organization, the State Society has the money or resources to investigate the vast number of alleged violations of the Medical Practice Act All they can do is to refer the matter to the Grievance Committee of the Board of Regents of the State of New York From a realistic standpoint there are charlatans and other quacks in the city who have repeatedly been convicted of practicing medicine without a license but are still in business They pay their fines and return to work Repeated convictions fail to deter this group Rigid legislation is sorely needed to rid the city and state of unqualified, unlicensed practitioners

The committee has enumerated 12 flagrant forms of outlaw practice which should be curbed

1 Diagnosis, treatment, prescribing, and dispensing by druggists and clerks

2 The illegal practice of medicine by chiropractors, chiropodists, and podiatrists

3 The illegal practice of medicine by foreign groups, such as "Chinese healers," "Polish barbers" etc

4 The practice of dermatology in beauty parlors

5 The practice of physical therapy in bathing establishments without medical supervision

6 The diagnosis of disease by physical therapists

7 Corporate medicine as practiced by utility groups and department stores

8 The treatment of diseases of the eye by opticians

9 Prescribing and diagnosing by psychologists and lay psychoanalysts

10 Diagnosis and treatment by naturopaths and food faddists

11 The practice of medicine by reducing groups and clinics

12 The performance of eye examinations by motor vehicle inspectors

arteriosclerotic invasion Those that were involved consisted of 4 cases of coronary arteriosclerosis and mihiary infarctions, 1 of which has added hypertension, 2 cases of coronary arteriosclerosis, 1 with thrombosis, and 1 case of rheumatic aortic stenosis with coronary arteriosclerosis and mihiary infarctions

However, arteriosclerosis seemed to have some effect on making the myocardium susceptible to the toxins of infection In the cases where acute mihiary infarction was found, a severe degree of arteriosclerosis of the coronary arteries was present

It is well to note that there are two conditions that might simulate arteriosclerosis in that they result in interference with the coronary blood supply They are the stenotic aortic lesion due, in our series, to rheumatic heart disease, and the syphilitic regurgitant lesion of the aortic valve usually associated with atresia or stenosis of the coronary mouths

### Summary and Conclusions

At total of 117 cases of sudden death that came to autopsy at the New York City Hospital has been studied Of

these 83 or 71 per cent were due to cardiac causes Infectious myocarditis was present in 20 cases while toxic myocarditis was found in 39 All told, 59 of the 83 cardiac cases were associated with infection In the noncardiac group the infection was hard to prove There were 7 that could be shown to be infectious or intimately related to some infection This gives us 66 cases, or about 56 per cent of the total, in which infection was responsible in whole or in part for the fatality

Arteriosclerosis played a less important role in our series We found that 29 deaths could be definitely attributed to such changes and thus represented about 25 per cent or less than one-half the number of deaths that proved to be the result of infection

Hence, from the evidence at hand we are led to believe that infection is a more frequent cause of sudden death than arteriosclerosis

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### BEST ATTACK ON THE MALPRACTICE PROBLEM

Talk is not cheap, but silence is golden'

An unusual increase in the number of suits against physicians for alleged malpractice ought to serve as a warning to physicians that the old proverb quoted above is just as true today as the day it was uttered, declares the *Ohio State Medical Journal*

Lightning strikes but little faster than an epidemic of malpractice suits The question is one which every physician must keep foremost in his mind There are a number of points which deserve his serious consideration

If proper preventive measures are used, there would be few if any malpractice suits If every physician would exercise due caution and good judgment, keep adequate and accurate records and learn that a wagging tongue may get him and others into trouble there would be no malpractice problem

Foolish is the physician who fails to protect himself with professional liability insurance written by a reputable insurance company

In times of uncertainty when some persons have their hands out for "easy" money and juries are swayed by emotionalism, not by facts or law, the physician who takes the attitude "it can't happen to me" is short-sighted, to say the least

When professional liability insurance companies increase their premiums and decrease their coverage after analyzing the actuarial tables and current experience, the physician had better spend more time trying to discover and correct the causes, less time cursing the insurance companies To put it another way Greater care and caution on the part of a greater number of physicians will curtail the number of malpractice suits Decrease in the number of suits will enable insurance companies to reduce premiums, expand coverage Lower premium rates and greater protection without additional cost will mean money in the pocket for the physician

An ounce of prevention is worth a pound of cure"

The number of male patients who consult women physicians has increased appreciably in the last few years it was revealed in a survey

of women physicians who attended a luncheon held as part of the mid-year meeting of the Women's Medical Society of New York State



pital, Welfare Island, between July 1, 1936, and July 1, 1939

As was noted previously, the great majority of deaths were of a vascular nature. If one wishes to classify pulmonary embolism as vascular, the percentage would be raised to over 90 as we had 6 sudden deaths of that nature during the period.

There were 34 that could be attributed to cardiac lesions. Infectious myocarditis was found 6 times, toxic myocarditis 15 times, coronary thrombosis 4 times, and fatty myocarditis once. There were 8 cases that were considered cardiac, although the anatomic changes were not pronounced enough to account for death.

In the noncardiac group there were 6 cases due to pulmonary embolism, 2 to aneurysms, 2 to the genitourinary system, and 1 each to arteritis, cerebral hemorrhage, and gastric ulcer.

In the 47 cases infection was found 7 times. There were 6 in the cardiac division, all affecting the myocardium, and one in the noncardiac section consisting of an infectious aneurysm in a chronic gastric ulcer. There was, therefore, about 14 per cent that exhibited positive evidence of infection in the lesion. There were 15 cases or over 31 per cent that showed toxic reactions of the myocardium. Hence, together, 45 per cent, or almost one-half of the 47, showed the effects of infection.

The infectious myocarditides were associated with septicemia in 1 case, with acute endocarditis in 2 cases, with pericarditis secondary to pulmonary abscess in 1 case, and in 1 case each they were rheumatic and tuberculous in nature.

We were able to place 15 cases in the toxic myocarditis division. In these instances there was associated infection in other organs. Bronchopneumonia occurred in 5 cases and chronic bronchitis in 2. In 1, chronic tuberculosis was found and in another an acute prostatic abscess. One was associated with a cellulitis of the abdominal wall following a cholecystotomy complicated with a bronchopneumonia. One case had an acute pyelonephritis with a stenotic

aortic lesion caused by rheumatic heart disease. One case had an infected stump from an amputation and a chronic suppurative bronchiolitis and bronchiectasis, while another was a combined infection of nasal diphtheria and a streptococcal tracheobronchitis. Finally, there were 2 cases with no demonstrable infectious basis.

In these cases of infectious and toxic myocarditis, the main gross findings in the heart were dilatation of the chambers, a poor color of the myocardium, and a soft consistence. In some of the hearts in which the histology proved the presence of miliary infarctions, the myocardium was flecked with light gray and fawn-colored areas.

We found the condition of the myocardial fibers to be the most important feature in the histologic examinations of the heart. The lesion is an acute parenchymal myocardial degeneration and, as has been pointed out in a previous communication,<sup>2</sup> is the most reliable histologic criterion of clinical symptomatology. The degree of damage varied somewhat from case to case but was always widely distributed, particularly throughout the ventricles and especially the left one. The parenchymal change was found in the cardiac deaths regardless of the etiologic factor that may have been present.

In the noncardiac group it was much harder to prove the presence of infection. The only 1 of this group we were able to show infectious was the gastric case. This was an exsanguinating hemorrhage from the rupture of a vessel in the base of a chronic gastric ulcer. The histology revealed an infectious aneurysm of the artery with chain cocci.

Arteriosclerosis played a part in some of our group of 47 cases, but all in all it was decidedly less prominent than that of infection. In the 6 cases of infectious myocarditis only 1 or 16 per cent showed any sclerotic changes. This patient had a rheumatic heart with aortic stenosis and coronary sclerosis. In the group of toxic myocarditis that contained 15 cases, 7 or almost one-half were free from

series did any of the patients fail to tolerate a minimum dosage of 150,000 U S P units a day. The only precaution taken in the limited number of cases reporting slight disturbances was the temporary cessation of medication for one or two weeks with subsequent reduction of the daily dosage to the previously indicated limit of tolerance.

The adjunctive measures prescribed throughout the course of treatment were confined to adequate rest, attention to diet, and proper elimination and physical therapy where indicated.

### Symptoms of Toxicity

As will be seen from the résumé of our cases, symptoms of toxicity were limited to slight nausea, heartburn, and headache. Violent symptoms such as vomiting, diarrhea, anorexia, polydipsia, and profuse swelling reported by other workers<sup>8,9,10,11</sup> were definitely not encountered by us. Our observations in this respect are particularly in sharp conflict with the statement of Abrams and Bauer<sup>11</sup> that "because severe toxic symptoms or hypercalcemia were encountered in all but three patients whenever the daily dose exceeded 200,000 U S P units, we did not feel justified in employing larger doses."

On the contrary, from our experience to date, we are inclined to agree with Steck,<sup>7</sup> Steinberg,<sup>12</sup> and Reed, Struck, and Steck<sup>16</sup> that the hazards of toxicity in high-dosage vitamin D therapy have been greatly exaggerated. In our opinion, many of the so-called "symptoms" attributed to vitamin D therapy might be appreciably discounted on closer scrutiny of the individual case. It seems unreasonable to label arbitrarily as "toxic" any mild degree of nausea or indigestion that, at least in our experience, was found to be easily controlled by the simple expedient of reducing the dosage to the patient's previously determined limit of tolerance. In this connection, we may well quote Reed, Struck, and Steck<sup>16</sup> to the effect that "while toxicity of vitamin D in the treatment of arthritis is no more hazardous than with other drugs, it must

be administered with care and, like any other drug, may not be tolerated by certain patients. The initial dose should, therefore, be small, and if symptoms of intolerance are manifested, it should be immediately discontinued. The patient should be instructed to be on guard for symptoms of nausea and increased frequency of urination—the early symptoms of intolerance. If the medication is discontinued when early signs of toxicity are manifested, the patients suffer no ill effects, and the treatment is resumed within ten days or two weeks, starting with a minimal dose."

The absence of significant alterations in the serum calcium and phosphorus levels in our group of cases would appear to uphold the contention of many investigators into this phase of the vitamin D problem—that chronic arthritis is basically not a calcium and phosphorus deficiency disease. Curiously, in a few cases where the blood calcium levels were above the normal range, a clinical improvement appeared more marked than in some cases showing a more normal calcium level.

Furthermore, in the light of the unfavorable results of other workers<sup>4,8,9,11,12</sup> contrasted with our own successful experience to date, the question of the relative degree of toxicity of the various vitamin D preparations employed in the treatment of chronic arthritis assumes a great importance in the final determination of the value of high-dosage vitamin D therapy.

While the artificial vitamin D, as a rule, is obtained from ergosterol, the natural source of vitamin D is obtained from fish. Bills<sup>17</sup> states that, in the artificial preparation of vitamin D, the properties of vitamin D are exhibited by at least ten different sterol derivatives. Five of these are well understood chemically and five are distinguished by fragmentary chemical and physiologic differences. There are three products on the market at the present time that are of practical interest to the clinician. Two of these vitamin D products (vosterol and Drisdol) are prepared according to the Wisconsin Alumni Foundation pat-

# A PRELIMINARY REPORT ON ACTIVATED ERGOSTEROL\*

## A Form of High-Dosage Vitamin D in the Treatment of Chronic Arthritis

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New York City

(From the Arthritis Clinic, Hospital for the Relief of the Ruptured and Cripped)

OUR interest in activated ergosterol for the treatment of chronic arthritis was stimulated almost four years ago by the recommendation of Dr Kristian Hansson, chief of the Physio-Therapy Department at Cornell Medical Center, and also of the Physio-Therapy Department at our hospital. He had had occasion to observe beneficial results in a few private cases and was offered a supply of the material by the manufacturers for experimental purposes in his clinic. Dr Hansson was gracious enough to suggest that our clinic was probably better organized for this particular purpose than his own and suggested that the therapeutic trial of this type of vitamin D be carried out in the Arthritis Clinic at the Hospital for the Ruptured and Cripped. As we had had no previous experience with massive doses of vitamin D and as the expense entailed at that time to purchase the material was more than either the hospital or the clinic patients could afford, we were very glad to accept the offer. At the beginning of the experiment we were extremely skeptical of the value of high-dosage vitamin D therapy in the treatment of arthritis, in spite of the excellent results that had already been published by Reed and his associates in Chicago.

However, after the first two years, our opinion changed considerably in favor of this form of treatment.

The group of refractory cases that were finally selected for this study consisted of 8 cases of the typical rheumatoid type, 8 cases of hypertrophic type, and 7 cases of mixed or borderline nature.

\* \* Ertron, a high potency vitamin D preparation produced by the Whittier Process (activation of heat-vaporized ergosterol by electrical energy) in the form of a dry gelatin capsule containing 50,000 U S P units of vitamin D. The necessary supply of this preparation was furnished by the Nutrition Research Laboratories, Inc., Chicago, Illinois.

### Mode of Administration

We have been using activated ergosterol in our clinic over a period of four years. During the first two years, we were very cautious in the matter of dosage because of the alleged toxicity of vitamin D in massive doses. We started our experiment by giving only 50,000 U S P units a day. This dosage was gradually increased. We finally came to the conclusion that it was fairly safe to start with a dose of 150,000 U S P units a day. As a result of this preliminary two year study, we had not been able to arrive at any definite conclusions as to the value of activated ergosterol in the treatment of arthritis. We had a few successful cases and many failures, but one thing that we did determine to our own satisfaction was the fact that, in doses up to 150,000 U S P units a day, toxic reactions did not occur.

At this time we decided that the system of having several internists carry out simultaneous investigations was not successful and that the only way to get reliable data would be to place the investigation in the hands of one well-qualified physician, whose sole duty would be to administer the vitamin D and make accurate notes as to the results obtained. During the past two years, we have increased our dosage from 100,000 U S P units to a general average of 300,000 U S P units a day. In some instances we have gone as high as 500,000 and 600,000 U S P units.

In most of our cases this average dose of 300,000 U S P units was maintained throughout the entire period of treatment. Little if any need was observed for increasing the dosage to the extremely high levels reported by some other workers,<sup>1,6,9,10,15</sup> but in no case in our

11	P	48	14 yr	Osteoarthritis	Moderate hands, legs and feet	11 yr	Gold sulfur, bee venom, general	None	8	700,000	None	Definitely less pain and stiffness, generally improved systemic condition	Less swelling, improved functional activity	Good
12	P	38	5 yr	Rheumatoid	Moderate hands, elbows and feet	11 mo	Various general	None	8	300,000	Slight nausea	Slightly diminished pain and improved systemic condition worse when medication stopped	Better motion involved joints, weight gain	Slight
13	P	41	10 mo	Rheumatoid	Severe shoulders, hands, knees and feet	None	Various	None	0	200,000	Slight nausea when increased to 300,000 units	Generally diminished pain and stiffness moderate improvement systemic condition	Much less swelling now able to walk and perform household duties	Good
14	P	10	2 1/2 yr	Rheumatoid	Severe, hands, ankles and feet	2 yr	Various vaccines general	None	0	200,000	Nausea and frequency of urination when increased to 300,000 units	Generally diminished pain and stiffness, marked improvement in systemic condition and general outlook	Marked improvement in mobility, hands and feet, less swelling, slight weight gain, x rays indicate less soft tissue swelling	Good
15	P	8	4 yr	Rheumatoid (Still active)	Severe, hips, hands and feet	4 yr	Physical therapy general	Slight	0	300,000	None	Marked decreased pain, greatly improved systemic condition	Less swelling, marked improvement functional activity physical appearance almost normal, weight gain	Good
16	P	40	20 yr	Osteoarthritis	Moderate feet and general	1 yr	Vaccines general	Slight	0	300,000	None	Pain almost negligible general systemic improvement	Joint mobility much improved, able to perform full household duties, less swelling weight gain	Good
17	P	34	2 yr	Rheumatoid (M)	Moderate hands and feet	None	Various	None	0	300,000	None	Progressively diminishing pain moderate improvement in systemic condition	Diminished swelling in wrists, increased functional activity, slight weight gain	Good
18	M	52	2 yr	Osteoarthritis (M)	Moderate lower back	3 mo	Salicylates vaccines	None	0	200,000	Slight nausea when increased beyond 200,000 units	Moderate systemic improvement, pain and stiffness diminishing until injured by fall	Moderate improvement in mobility weight gain	Good
19	P	35	0 yr	Osteoarthritis	Moderate hands	1 yr	Vaccines general	None	0	300,000	None	None (Patient not particularly cooperative in attendance)	None	None
20	P	41	7 yr	Rheumatoid (M)	Moderate hands and feet	14 mo	Gold general	None	5	300,000	None	Pain has practically disappeared but recurs with adverse weather conditions moderate systemic improvement	Less swelling, better functional activity slight weight gain	Good
21	M	57	8 yr	Osteoarthritis	Moderate general involve ment	3 1/2 yr	Gold sulfur, hy perpyrexia, general	None (Worse)	0	100,000	None	None recent change in diet being cure fully observed	None	None
22	P	30	2 yr	Rheumatoid (M)	Severe hands and feet general	None	Gold, sodium sulfate, calcium, brucine, general	None (Worse)	4	300,000	None	Severe former pains progressively diminishing marked symptomatic improvement and better outlook	Upper extremities much more mobile feet still in braces but less stiff new weight gain	Slight

TABLE 1.—RÉSUMÉ OF STUDY ON GROUP OF CHRONIC ARTHRITIS CASES TREATED WITH ACTIVATED BROOSTEROL ( ERTON<sup>®</sup> )—A FORM OF HIGH-DOSE VITAMIN D

Case No	Sex	Age	—Characterization of Arthritis—			Observation Prior to Activated Ergosterol			Time under observation, months	Average daily dosage (U S P units)	Toxic manifestations (min D)	Subjective changes	Objective changes <sup>e</sup>	Degree of improvement
			Duration	Classification <sup>a</sup>	Extent of disability	Time under observation	Therapy							
							Forms of therapy previously attempted	Degree of improvement						
1	F	40	2 yr	Osteoarthritis	Moderate hands and feet	2 mo	Salicylates, ionic irrigations general	None	18	200 000	None	Greatly reduced pain, general systemic improvement, more hopeful outlook	Progressive diminution swelling, greater functional activity, weight gain	Good
2	F	63	2 yr	Osteoarthritis (M)	Moderate hands and feet	3 mo	Gold salicylates orthopedic measures	None	17	200 000	Nausea beyond 200-000 units	Much less pain, better systemic condition. Worse when medication discontinued	Greater mobility, able to abandon brace, X rays indicate less decalcification	Good
3	F	35	2 yr	Rheumatoid (M)	Severe hands and feet	2 mo	Removal foci of infection, vaccines general	None	16	300 000	Slight nausea beyond 300,000 units	Former intense pains disappeared, earlier relapses with adverse weather conditions no longer experienced	Less swelling, has resumed full household activities, X rays indicate progressive bone destruction	Excellent
4	M	40	9 yr	Rheumatoid	Severe, jaw hands and feet (wheel chair)	4 1/2 yr	Gold, misc. vaccines general	None	15	350 000	None	Almost total disappearance pain and stiffness, marked systemic improvement	Has regained practically full use, all involved joints now able to tend tailoring business, drive car	Excellent
5	F	47	5 yr	Osteoarthritis (M)	Moderate hands and feet	15 mo	Removal foci of infection, bee venom, misc. vaccines, general	None	15	300 000	None	Slightly less pain, worse when medication was interrupted—which she did frequently	Slight weight gain	Slight
6	F	55	2 yr	Osteoarthritis	Moderate arms and shoulders	6 mo	Salicylates, general	None	15	300,000	None	Slightly less pain, condition aggravated by weather conditions and family troubles	None	Slight
7	F	55	8 yr	Rheumatoid (M)	Severe hands and feet	6 mo	Misc. vaccines salicylates general	None	15	200 000	Occasional slight nausea	Less pain and soreness, moderately improved systemic condition, more hopeful outlook	Swelling in fingers greatly diminished, moderate improvement in functional activity	Slight
8	F	65	2 yr	Osteoarthritis	Severe shoulders hands and feet	8 mo	Sulfur vaccines general	Slight	11	300 000	None	Almost complete disappearance of pain, marked systemic improvement, completely changed outlook	Marked diminution of swelling, regained full use of hand and feet, performs full household duties, weight gain	Excellent
9	F	15	5 yr	Rheumatoid	Severe hands and ankles	3 1/2 yr	Bee sting, gold hyperpyrexia casts general	Slight	10	200 000	None	Intense former pains have disappeared, marked systemic improvement, changed outlook	Stiffness and swelling greatly reduced, weight gain, functional activity now normal	Excellent
10	F	52	5 yr	Osteoarthritis	Moderate lower back	1 yr	Removal foci of infection, sulfur vaccine, local	None	9	300 000	None	Slightly less pain and stiffness, marked systemic improvement	Able to walk without obvious limitation of motion, slight gain in weight	Slight

that time, following massive doses of vitamin D, were not due to the vitamin D per se, but in all probability were attributable to a toxic side product called toxisterol. It has been well established that the ultraviolet irradiation of sterols, up to a certain point, will produce a non-toxic product called calciferol (vitamin D<sub>2</sub>), but that ultraviolet irradiation beyond that point will produce toxisterol, most likely the cause of the toxic symptoms.

Therefore, the question arises as to whether the toxic manifestations reported by various other workers, who used products produced by the ultraviolet method of irradiation up to this time, might not be attributable to the small trace of toxisterol in the product.

The writers have endeavored to obtain, from some of the leading pharmaceutical firms manufacturing concentrated vitamin D preparations, information that might clarify this very important factor of toxicity. While these manufacturers all claim they believe that their respective preparations are entirely free of toxic elements, their claims are based largely on the fact that in relatively small doses, their products do not produce toxic reactions in rickets. The manufacturers of activated ergosterol claim that the vitamin D obtained by the Whittier process is safe to employ in massive doses in the treatment of arthritis because, so far as they have been able to find out up to the present, it does not contain any toxic side products.

#### Observation During Course of Treatment

Indications of the beneficial effects of activated ergosterol therapy in the majority of our cases were observed within varying periods of time, but the important point to emphasize is that the effects do not appear quickly. In a few cases the improvement was obvious within a month or six weeks, continuing at a reasonably steady rate of progress with no relapses. In the larger proportion of cases, however, obvious benefit from the medication was more delayed,

little change being detected until after three months or more had elapsed. Some patients reported relapses when the medication was discontinued or interrupted for short periods. In two of these cases, it was found that the relapses could have been caused by other factors occurring simultaneously with the interruption of the medication. In general, beneficial effects from the drug were observed to be somewhat slow in onset, but these beneficial effects were, as a rule, steadily favorable and sustained once improvement had begun.

*Subjectively*, improvement was characterized by a generally improved systemic condition, increased muscular tone, and less fatigue, pain, and stiffness. Increasing ability to accomplish household and occupational activities that were previously impossible was reported by many patients.

*Objectively*, less swelling and increase in weight, functional activity, and joint mobility were observed in the majority of cases. Had we anticipated anything approaching the degree of marked clinical improvement actually obtained, provision would have been made at the start of our study to support our findings more convincingly by means of motion pictures, and periodic determinations would have been made with specially designed calipers, muscle tone instruments, and the ergograph.

Careful scrutiny of laboratory data reflected changes of little significance that could be directly attributed to the action of the medication. With regard to sedimentation rates, which in our opinion do not provide necessarily reliable guides for evaluating all types of arthritis cases, the variations were not found to have any definite relationship to the degree of improvement noted.

Periodic and final x-ray examinations of involved joints produced very few indications of changes in bone or soft tissue structure.

#### Appraisal of Results

The appraisal of the degrees of improvement indicated in column 15 of

TABLE 1—RÉSUMÉ OF STUDY ON GROUP OF CHRONIC ARTHRITIS CASES TREATED WITH ACTIVATED ERGOSTEROL ( EKTRON )—A FORM OF HIGH DOSE VITAMIN D (Continued)

Case No	Sex	Age	Duration	Characterization of Arthritis	Observation Prior to Activated Ergosterol Therapy			Observation Throughout Course of Activated Ergosterol Therapy					Degree of improvement
					Time under observation	Forms of therapy attempted	Degree of improvement	Time under observation, months	Av daily dosage (U S P units)	Toxic manifestations	Subjective changes	Objective changes	
23	M	60 3/4 yr	Dura	Extent of disability severe shoulders, hands, and feet. (On crutches)	2 yr	Salicylates, general	Slight	4	300 000	Slight nausea when increased to 400,000 units	Slightly less pain and stiffness generally improved systemic condition (Feels worse when medication stopped)	Progressive improvement functional activity, has discarded crutches	Slight

A 'M' represents mixed or borderline cases absolutely accurate classification of which is extremely questionable. For at least two years of observation at our clinic majority of cases treated unsuccessfully elsewhere for at least two years, which might be expected to substantially effective changes, but not found particularly valuable will be Table 3. Except where specifically mentioned no changes of any significance were observed in comparisons of  $\alpha$  rays taken before and after course of treatment.

5. These two cases may not have been under treatment sufficiently long to appraise results

The following criteria has been employed to evaluate the degree of improvement:

*Excellent*—Progressive marked disappearance of subjective symptoms, return to normal range of motion, active and gentle occupation, no relapses.

*Good*—Progressive and sustained improvement in pain and swelling, general improvement in systemic condition, increased motion of involved joint.

*Slight*—Some diminution of pain and swelling, progressive lessening of restriction of joint motion, slow but steady systemic improvement.

*None*—No obvious subjective or objective improvement to date, but patient no worse.

Isaacs and Mc Trille, 1937 Hench et al., Jan 1938	Not stated	Not stated	Not stated	Not stated	100 000	Invariably caused pallor and heat	believe small doses beneficial from vitamin D deficiency standpoint large doses may prove disastrous (100,000 increased large some reduction of pain and increased well being noted but cures not obtained well in lesions altered but little
Parley, 1938 July 1938	25 Atrophic	Not stated	1-2 yr	Not stated	250 000-600 000	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	
Abrams and Bauer, 1938 Oct 1938	87 Various types	Not stated	2 mo or over	Not stated	150 000 - 500,000 gradually increased to limit of tolerance	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	
Steinberg, 1938 Oct 1938	18 Rheumatoid	Average 2 yr	0 mo	Drisol	Average 100,000	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	
Anderson and Thiele, 1938 Mar, 1938 Terhune, 1938 May 1938	40 20 Atrophic 7 Hypertrophic 1 Scler 2 Unknown	Not stated	Several weeks to 1 1/2 yr	Not stated	100 000	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	
Anderson and Thiele, 1938 Mar, 1938 Terhune, 1938 May 1938	12 Various types	0 mo	4-12 mo	Viosterol	150,000-250 000	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	
Parley, 1938 Sept., 1938	21 15 Osteo 8 Mixed 3 Rheumatoid	At least 3 mo	At least 3 mo	Drisol	200 000	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	
Parley, 1938 Sept., 1938	15 13 Atrophic 3 Hyper	Not stated definitely	Variable, ma jority over 1 yr	Not stated	Average 150,000- 200,000, some cases 600 000- 800 000	100% completely improved, no unfavorable results In most cases improvement so marked that resumption of normal activity and business was possible Most discharged patients continue to appear permanently cured and generally improved blood picture and decreased in sedimentation rates swellings and deformities diminished in x rays	



TABLE 2.—SUMMARY OF COMPARABLE DATA FROM REPORTS OF PREVIOUS WORKERS WITH HIGH DOSEAGE VITAMIN D IN THE TREATMENT OF ARTHRITIS

Authors and Date of Report	No. of Cases	Characterization of Arthritis	Period Under Observation Before Vitamin D Therapy	Average Duration of Vitamin D Therapy	Form of Vitamin D Agent Employed	Daily Dosage U. S. P. Units	Toxic Manifestations	Evaluation of Results—General Comment
Dreyer and Reed, <sup>1</sup> Sept. 1935	07	Various types	Not stated	Not definitely stated	Vioosterol, Calciferol, Driedol	Initial — 200,000, average 400,000	Occasional early symptoms easily recognized and controlled by brewer's yeast and hypercalcemia	Improved 60% no improvement 10% in certain 15% In nearly all cases showing benefit there was general improvement in the nutritive condition and less evidence of vasomotor instability. Later most cases showed greater muscular strength, less tendency to fatigue and improved gastrointestinal function. An efficient form of treatment. More extensive clinical trial and study required before classification as cure.
Vrtnak and Lang, <sup>2</sup> Apr. 1936	20	Atrophic	Not stated	8 mo	Vioosterol	150,000–250,000	Nausea developed in all patients frequency of urination and nocturia in some	Varied degrees of improvement 60%, no improvement 40% X rays show changes in 5 cases showed no appreciable change in bone density. Results not unlike those obtained with number of other methods producing only systemic relief. Conservative attitude indicated toward this form of therapy.
Holbrook and Hill, <sup>3</sup> July, 1936	25	Atrophic	Several months control	Over 4 mo	Not stated	200,000–350,000	Not stated	Patients reported less pain. Insufficient time to evaluate results.
Wyatt Hicks and Thompson, <sup>4</sup> Oct. 1936	40	Chronic proliferative	6 mo	Not stated	Vioosterol, Driedol	200,000–300,000	8 patients abandoned treatment because of violent reactions (persistent nausea, intense headache, profuse swelling, diarrhea) mild reactions in 6 others.	Definite and clear clinical improvement 20%, no definite improvement 60% failures 20%. Possibly some of the 60% may yet show some benefit attributable to this treatment. Laboratory tests disclose no significant changes.
Livingston, <sup>5</sup> Nov. 1936	22	Various types Severe	Not stated	Not stated	Ertron	200,000–600,000	When toxic symptoms appear drug should be discontinued.	Clinically improved 80%, no improvement 10% (1 case abandoned treatment). No contraindications to this form of therapy. More rapid improvement observed in 6 cases having hyperpyrexia as adjunctive chemistry. No significant changes in blood chemistry.
Parley, <sup>6</sup> Jan. 1937	27	Various types	Not stated	Not stated	Ertron	Initial — 200,000, obstinate—up to 600,000	Symptoms seldom appeared with dosages under 400,000. Some dizziness and nausea with 200,000. Controlled by brewer's yeast.	In atrophic group reduction or disappearance of pain and x rays show remarkable reparative changes in joints (filling in of resorbed regions and reconstruction of cartilage). In hypertrophic group not a single case failed to respond in some degree and x rays showed improvement and reconstruction of cartilage. Hyperpyrexia found useful in severe cases.
Steck, <sup>7</sup> Jan. 1937		Various types	Not stated	At least 6 mo	Driedol, Vioosterol, Calciferol, Ertron	Initial — 1,000,000, average 300,000. After 6 mo — 180,000	No high percentage of intolerant. Danger of toxicity no more hazardous than in other high dosages. Brewer's yeast administered to control symptoms.	75–80% of cases benefited to appreciable extent and progress of disease was arrested. Joint mobility improved. Joint mobility weight, muscular tone and gastrointestinal disturbances less noticeable. X rays show resorption of bone and calcification. Vitamin D considered a valuable adjunct to general therapeutic measures.

TABLE 3—COMPARATIVE LABORATORY AND WEIGHT DETERMINATIONS ON GROUP OF SEVERE CHRONIC ARTHRITIS CASES TREATED WITH ACTIVATED ERGOSTEROL ('EXTON')—A FORM OF HIGH-DOSE VITAMIN D

Case No	Blood Calcium		Blood Phosphorus		Sedimentation Rate (Mm. per 1 Hr)		Weight		Degree of Clinical Improvement
	Before	After	Before	After	Before	After	Before	After	
1	9 8	9 6	3 25	2 91	20	15	136	147	Good
2	11 5	12 2	4 1	2 8	78	55	109	101	Good
3	10 2	9 9	2 85	3 25	95	23	216	201	Excellent
4	10	11 1	3 35	2 8	42	3	154	173	Excellent
5		8 5		3 63	10	5	160	167	Slight
6	8 8	11	4	3 29	36	36	174	178	Slight
7	10	16 1	3 75	2 8	22	12	181	172	Slight
8	9 7	8 8	3 1	2 56	19	36	116	135	Excellent
9		10 4		2 86	24	13	92	105	Excellent
10	10 6	11	2 85	2 45	6	30	120	127	Slight
11	10 2	10	2 72	2 18	25	15	147	144	Good
12	10		3 6		76	87	117	124	Slight
13		13 2		3 25	85	100	105	104	Good
14	10 7	16 3	3 1	2 45	25	110	94	101	Good
15		11 5		3 85	19	29	43	49	Excellent
16		9 6		2 84	12	17	135	141	Good
17	10	12 0	2 7	2 73	21	18	133	138	Good
18	11 5	11 1	3 37	2 27	77	43	158	167	Good
19	10 8	11 5	2 4	2 68	30	30	156	153	None
20	8	10 9	2 75	2 8	29	24	121	127	Good
21	9 8	10 9	2 45	2 72	22	4	181	180	None
22	9 2	10 4	3 9	3 09	14	44	114	119	Slight
23		14 5		2 68	83	105	115	117	Slight

NOTE.—Initial blood calcium and phosphorus determinations in Cases 5 9 13 15 16 and 23 made but inadvertently not recorded. Missing determinations in Case 12 not taken.

Any subjective, objective, laboratory, or x-ray changes of especial interest or significance were brought to the attention of the chief of clinic and, when necessary, discussed with the orthopedic surgeon and other internists attached to the clinic.

Immediately prior to the preparation of this preliminary report, blood examinations, x-rays, and photographs were ordered for final comparison. Patients were than interviewed and examined by the chief of clinic, orthopedic surgeon, and other internists for individual and combined appraisal of results.

With further reference to the nature of the clinical evidence submitted in studies purporting to evaluate the efficacy of any new form of treatment, we believe two factors merit special discussion.

In the first place, considerable difference of opinion prevails as to just what comprises "sufficient controls" in the management of a clinical study of any new form of treatment for arthritis. One school leans to the theory that a simultaneous study of parallel groups—one with and one without test treatment—with evaluation of results based on an analysis of the data obtained from such treated and nontreated groups provides an adequate control. The writers do not concur in this opinion but believe that

truer evaluation can be made of the results obtained if the study is based on the selection of a group of cases of reasonably long duration that have previously proved to be resistant to most of the various accepted forms of therapy. The selection not only assures more direct comparison of results *before* and *after* institution of therapy but also provides a strong argument to the often-heard claim—in the event of a successful result—that any other form of therapy might have been equally effective. Furthermore, we believe that if any new form of therapy should prove more efficacious in such long standing cases, it might be reasonable to expect at least an equal if not better degree of cure or improvement by its application in less severe cases of shorter duration.

Accordingly, with but few exceptions, all the cases selected for our study had been under treatment and observation at our clinic for two years or more. The decision to confine our study to this type of case, added to the fact that only patients who had been uninterruptedly on treatment for at least four months have been included, naturally limited the total number of cases upon which we have to report at this time. Nevertheless, our total of 23 cases is slightly larger than the number of patients reported by other

Table 1 represents, in the case of each patient, a consensus of the considered judgment of the attending physician in charge of the study, the orthopedic surgeon, chief of clinic, and such internists who were called in consultation. Employing the criteria that we found very satisfactory in evaluating the results of a study on a group of resistant cases, receiving gold salts therapy over a period of two years,<sup>18</sup> we found that, under treatment with activated ergosterol over a period of two years, 5 patients or 21 per cent of the group showed excellent improvement, 9 patients or 39 per cent showed good improvement, 7 patients or 31 per cent showed fair improvement, and in 2 patients or 9 per cent there was no change.

A careful analysis of these results reveals no significant differences in the effectiveness of activated ergosterol therapy in the three types of arthritis included in the group in this report.

### Comment

The numerous conflicting reports of previous workers employing high-dosage vitamin D therapy in arthritis obviously led the Council on Pharmacy and Chemistry of the American Medical Association<sup>19</sup> to conclude that "clinical evidence does not warrant the claim that massive doses of vitamin D are of benefit in chronic arthritis, in allergic disorders, or in psoriasis." However, the council stated that *it believed further studies should be conducted, but because of possible toxic effects of large doses of vitamin D, such studies should be made only in clinics where close supervision is possible.* Previously<sup>20</sup> the council had pointed out that satisfactory evidence must be produced to show that sufficient controls have been employed and that follow-up periods of sufficient length to rule out spontaneous remissions have been observed. The council also stated that adequate definition should be made of the type of case in which preparations can be used with fair expectation of benefit, as well as the chief contraindications and best form and route for use.

As will be seen from the following outline of procedure, every effort was made to adhere as rigidly as possible to these requirements in conducting our study.

Before instituting treatment, all patients were informed of the research nature of the study and impressed with the need for complete cooperation and regularity of clinic visits. In the final appraisal of results, the unusually cooperative attitude of the majority of our patients undoubtedly contributed materially to the excellence of the results obtained.

While in the first two years of our study, the work was carried out by four internists, the last two-year study was carried on continuously by a single internist (W. H. S.). We believe that a closer relationship between clinic and patient, as well as more effective supervision of each patient's course of treatment, will result under such an arrangement.

Immediately preceding institution of the new therapy, all patients were subjected to the following routine: (a) complete laboratory examination, with particular attention to sedimentation rate, N P N, sugar, uric acid, calcium, phosphorus, bleeding and clotting times, and Wassermann determinations, (b) urinalysis, (c) blood pressure and weight determinations, (d) x-rays and photographs of involved joints and areas, (e) examination by orthopedic surgeon for accurate determination of joint limitation.

Throughout the course of treatment, weekly or at least semimonthly observations were made. Subjective changes as reported by the patients, i. e., increased or decreased pain, stiffness, functional activity, appetite, gastrointestinal symptoms, and general condition were carefully recorded on the patient's chart. From the objective standpoint, evidences of change in body weight, swelling, and joint involvement were likewise recorded by the attending physician.

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Blood chemistry and x-ray examinations were made at intervals and recorded for study and comparison with earlier observations.

improvement has been marked and sustained

3 No serious toxic manifestations were encountered. From our own experience with the particular agent used, it would appear either (a) that the dangers of toxicity connected with high-dosage vitamin D therapy have been in general greatly exaggerated, or (b) that the selection of the high-dosage vitamin D agent used in the treatment of chronic arthritis probably had an important bearing on the degrees of toxicity encountered.

4 Laboratory results and x-ray findings disclosed no clear correlation with the degrees of subjective and objective improvement observed.

5 The results of this preliminary study are sufficiently favorable to warrant further intensive study of the particular form of high-dosage vitamin D agent used, as well as the broader problem of vitamin D in general in the treatment of arthritis. It is appreciated that, although the results look promising at present, a thoroughly intensive study, carried out by several well-organized clinics over a three- or four-year period, may eventually prove necessary in order

to obtain a truer evaluation of this form of therapy

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## BEHIND THE NEWS

Newspapers in favor of state medicine or partial to a nice juicy scandal like to play up stories of medical neglect. Only rarely does the truth behind these stories get as much prominence as the original report.

Some time ago a resident of Bergen County, New Jersey, notes the *New York Medical Week*, wrote to Mrs. Roosevelt that he was without medical care and in dire need of help. The First Lady, with her usual good sense, turned the letter over to the Surgeon General for investigation. It thereupon developed that the complainant had been under constant medical observation almost to the time he approached Mrs. Roosevelt and that he had stopped treatment on his own initiative. To our knowledge no newspaper has ever said a word about the number of false cases, like this one, on the basis of which a picture of widespread medical need is painted.

Only recently Philadelphia dailies expressed great indignation over the death of an infant who, they said, had been refused professional attention. Investigation revealed that although the child appeared ill early in the morning the parents waited until evening before seeking medical aid. The doctor whom they called already

had 2 emergency cases on hand and urged that a neighborhood physician be summoned. The people failed to follow his advice and made no further effort to get help. The child died that same night.

Obviously this is a case of lay ignorance rather than medical neglect. There are eighty-eight hospitals in Philadelphia and 4,221 practitioners yet the parents abandoned the search for medical assistance when the first physician they tried was unable to come. The Philadelphia papers which shed ink tears over this admittedly sad incident made no mention of the emergencies on which this man was engaged but depicted him as a monster of cruelty.

In any city with thousands of medical men there may be a few who are too lazy or callous to leave their homes at inconvenient hours. They are an almost imperceptible minority, however, and their defection need not condemn anyone to go without necessary care. There are always other physicians—and ambulance service in acute emergencies. The trouble in these cases does not lie in a shortage of medical facilities but in the fact that many persons don't know how to go about utilizing them.

workers, such as Bauer, who based his report on 19 cases, and we feel that a report on 23 refractory cases is sufficient for the purposes of a preliminary report.

In the second place, unlike other chronic diseases, particularly tuberculosis and cancer, no universally acceptable follow-up period has ever been established for judging the permanency or extent of cures in arthritis. There is no doubt that if such period could be determined to the satisfaction of all, much of the present uncertainty and division of opinion as to the relative merits of many forms of therapy would be eliminated. In our opinion, a five-year follow-up period, particularly if the report is based on cases previously severe and of at least two years' duration, should suffice to enable us to judge the degree of cure effected and rule out the possibility of spontaneous remissions. We have made it standard practice in our clinic to follow up cases for this period of time before making final evaluation of end results. Therefore, we wish to point out that since this preliminary report covers only the last two years of our work, it should not be interpreted as a final evaluation of our observations with respect to the permanent value of activated ergosterol therapy in the treatment of arthritis.

For the time being, however, the undeniable clinical improvement observed in some of these refractory cases and the almost total lack of toxicity resulting from this form of therapy in our patients have served to dispel our original skepticism regarding both the toxicity of the product and the therapeutic value. In our opinion, it compares favorably with, and probably will prove in the future to be better than, most other presently accepted forms of therapy. Certainly further intensive study appears to be warranted, not only with respect to this particular form of high-dosage vitamin D but also with respect to the many presently clouded phases of general vitamin D therapy in arthritis.

In submitting this preliminary re-

port, we admit that it is almost in direct contradiction to that of Bauer and his co-workers published in 1938, entitled "The Treatment of Rheumatoid Arthritis with Large Doses of Vitamin D." It should be pointed out, however, that they also only used one form of vitamin D, a concentrated form prepared by the ultraviolet method. The title of the report is somewhat misleading, as it gives the impression that the condemnation of the use of vitamin D is comprehensive and includes all forms.

It must be admitted that our preliminary report is lacking in comparative studies as to the relative toxicity and efficiency of the various types of artificially prepared vitamin D as well as the effectiveness and relative degree of toxicity of massive doses of natural vitamin D. At present we do not know whether the beneficial results we have obtained are of a temporary or permanent nature. However, we plan to continue our study on a much larger scale for a period of two years. At the end of this time, we hope to be able to publish a final report that will be much more comprehensive, and perhaps we shall be able to answer some of the present perplexing questions as to the relative degree of toxicity to be expected and the relative therapeutic value of massive doses of vitamin D in the treatment of arthritis.

### Summary and Conclusions

1 In this preliminary report we have presented the results of a rigidly supervised two-year study on a group of 23 cases of severe chronic arthritis which, after observation for an average period of two years during which time the patients proved to be resistant to most of the various other forms of therapy employed in our clinic, were treated with activated ergosterol prepared by the Whittier method, a form of high-dosage vitamin D.

2 These results indicated that the administration of this drug has benefited the great majority of these patients in varying degrees. In a relatively high percentage of cases the degree of clinical

improvement has been marked and sustained

3 No serious toxic manifestations were encountered. From our own experience with the particular agent used, it would appear either (a) that the dangers of toxicity connected with high-dosage vitamin D therapy have been in general greatly exaggerated, or (b) that the selection of the high-dosage vitamin D agent used in the treatment of chronic arthritis probably had an important bearing on the degrees of toxicity encountered.

4 Laboratory results and x-ray findings disclosed no clear correlation with the degrees of subjective and objective improvement observed.

5 The results of this preliminary study are sufficiently favorable to warrant further intensive study of the particular form of high-dosage vitamin D agent used, as well as the broader problem of vitamin D in general in the treatment of arthritis. It is appreciated that, although the results look promising at present, a thoroughly intensive study, carried out by several well-organized clinics over a three- or four-year period, may eventually prove necessary in order

to obtain a truer evaluation of this form of therapy

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# CLINICAL REPORT ON EYE LESIONS DUE TO NASAL SINUS INFECTION

FRANK BARBER, M D , and JOSEPH J McNAMARA, M D ,<sup>†</sup> Rochester, New York

**T**HE diagnosis of iritis, cyclitis, uveitis, or retrobulbar neuritis should offer no difficulty to the ophthalmologist who has had adequate training. The difficulty is in locating the etiology of the various conditions. In syphilitic and diabetic patients the diagnosis is easily made by standard laboratory methods. Tuberculosis offers more difficulty.

The cases we are presenting were selected from a group, the majority of whom were suffering with chronic involvement of the uveal tract or repeated attacks of inflammation over periods of one to seven years. For this report, cases that have been observed over a long enough period since operation to justify procedures taken were selected.

Aeration and ventilation of nasal sinuses have been performed in patients showing severe eye disease with no other demonstrable foci of infection, and where there is definite history of nasal sinus disease such as postnasal dropping, repeated colds, or a history of a severe upper respiratory infection antedating the onset of eye trouble by a few weeks. Many patients had been under prolonged treatment, suffered severe discomfort, and felt that they might go blind.

## Case Reports

**Case 1**—C Y, woman, aged 66, housewife, was first seen November 19, 1926. Six months previously the patient had developed iritis in right eye. Since then at periods of twelve days she had had acute recurrences in her right eye. Examination showed that the patient had complete artificial dentures, and her jaws were apparently clear. Local application to the nose gave relief, but she still had recurrences every twelfth day. She was referred to Dr McNamara on November 19, 1926. A nasal operation was performed on January 6, 1927, after which the

patient had one attack, again on the twelfth day. She was free from attacks for two years, then developed one attack following an acute cold. The patient was last seen December 28, 1936, having had no attacks since 1928.

The nasal history in this case was indefinite except for occasional acute colds. Teeth and tonsils had been taken out, examination disclosed a dry nose anteriorly, high deviation of septum to right. The right posterior lateral pharyngeal band was slightly prominent. Posterior rhinoscopy showed no thickening of posterior tip of middle turbinate. There was no pus present. After repeated examinations and conservative treatment, on January 6, 1927, submucous resection, middle turbinate resection, and curettement of right anterior and posterior ethmoidal cells were done. Membrane was thickened, and there was a small amount of polypoid tissue but no frank pus. The patient returned July 3, 1928, following an acute cold. She had several conservative treatments with prompt improvement in eye condition.

**Case 2**—N G W, woman, aged 64, housewife, was first seen March 16, 1929. For the past seven years she had had many attacks of iritis in both eyes. At this time the pupils were very much bound down and vision was right, 3/200, left, 3/200. A physical examination revealed no other etiologic factors, and a nasal operation was performed. After recovery from the operation the patient had no more attacks of iritis but did not regain her vision because of secondary cataracts. On April 30, 1932, the right eye was operated on for cataract, and on July 19, 1932, her vision was 20/50 with cataract glasses. Examination on October 24, 1932, showed the vision to be 20/30, and she was able to read No. 4 near-vision type.

The nasal history was one of repeated head colds, postnasal discharge, and clearing of throat in morning. The patient's teeth and tonsils had both been removed. The septum was thickened and the left middle turbinate showed polypoid degeneration anteriorly. There were also prominent lateral pharyngeal bands. An operation was performed April 24, 1929. The middle turbinate was resected, the anterior and posterior ethmoid cells were exenterated,

<sup>†</sup> Died October, 1939

and the anterior wall of left sphenoid was resected

*Case 3*—J F M, man, aged 54, was seen May 16, 1922, with a severe iridocyclitis in the right eye. The patient was suffering with a general arthritis and could just get about with a cane and crutch. Seven years ago he had had trouble in the left eye, and the eye had been enucleated for secondary glaucoma. The patient improved slightly under atropine, potassium iodide, and soda and boric solution in his nose. On June 5 a recurrence showed the eye to be very painful, and after a general physical examination the patient was referred to Dr J R. Honiss for treatment. Dr Honiss's report showed a polypoid condition of the ethmoid and inflammation of the sphenoids. There were several carious teeth. Dr Honiss's notes on the operation were as follows: "June 8. When operated on, the anterior wall of the sphenoid was removed. There was pulsation of a purulent secretion. The secretion could be pulled out in strings over a foot long, it was so tenacious. It looked like *Streptococcus mucosus* discharge one sees in ears at times. No pathologic examination was made. All secretion was wiped away, the nares packed with gauze. One week later the patient could walk without assistance. In three months time the patient could attend to duties as janitor." Note made from examination on June 23. The eye was clear, with the vitreous clearing up. Notes were made on the following dates: July 10, 1922, vision 20/40, October 21, 1922, vision 20/20, November 21, 1922, slight irritation in eye. The case was referred back to Dr Honiss for further care. In 1925 patient had another slight attack of iritis which cleared up under nasal treatment. The patient was last seen January 26, 1926, and he had been free from trouble for about a year. This patient went along without further trouble until his death in 1932.

*Case 4*—J W R, man, aged 66, street car motorman, was seen April 24, 1925, in consultation with Dr Snell. History. In 1919 Dr Snell saw this patient who was suffering with recurrent iritis in the left eye. Under Dr Snell's care, the patient had a rise of tension each time mydriatics were instilled into his eye. December, 1919, Dr Snell did an Elliott trephine operation on the left eye. Since that time, the left eye had been quiet. In 1920 the right eye became inflamed but cleared up under atropine. In March, 1925, the right eye developed iritis, and again whenever mydriatics were used, the tension went up. Examination showed iritis, cyclitis, and uveitis of a low grade. Tension of the right eye was 32 (Schötz). He was given sodium salicylate, 2

grams intravenously every other day. While on the sodium salicylate injections, the eye apparently improved, but the tension went up with mydriatics—30 to 35 mm. The patient stated that when he arose in the morning, the vision was clear, but became markedly blurred after an hour or two. This blur lasted until about noon and then cleared up. This symptom is suggestive of nasal sinus retention, and patient was referred to Dr McNamara for examination. Under nasal treatment, the tension did not go up after mydriatics. Nasal operation was performed on the right side of the nose and later on the left side. After operation on the left side, the left eye became acutely inflamed, and a hemorrhage developed in the anterior chamber with no rise in tension. Hemorrhage cleared up in four or five days.

On May 13, 1925, the nasal history was negative except for postnasal catarrh. Examination showed the septum thickened, the middle turbinates in contact with lateral nasal wall, and the nasal mucous membrane inflamed. On July 30, 1925, the right middle turbinate was resected, and the anterior and posterior ethmoidal cells were exenterated. The membrane was found to be slightly thickened. The operation was repeated on the left side two weeks later, with practically the same findings.

*Case 5*—Sr L, woman, aged 42, was seen September 24, 1935. One year previously the patient had trouble in the left eye and was treated in the hospital for seven weeks. Nine months later she had a serious throat infection and in two weeks the left eye became inflamed. The tonsils had been removed seven years before and the teeth extracted a year later. She had been anemic. The left eye showed uveitis and iridocyclitis, with many posterior mutton-fat precipitates. The patient had been thoroughly examined and no foci of infection found. She was referred to Dr McNamara. He reported obstruction of the ethmoids with probable infection of the antrum on the left side. X-rays showed some cloudiness of the frontal ethmoid and a large domelike cyst arising from the floor of the left antrum. The patient was hospitalized and the antrum operated upon. An encapsulated abscess was discovered on the floor of the left antrum, which showed a hemolytic streptococcus as the predominating organism. This patient had a rather protracted and stormy hospitalization. The eye improved for a time, but later developed secondary glaucoma and was enucleated. At the present time, the patient's right eye behaves reasonably well except after an acute nasal infection when a good deal of blurring takes place, and there has been slight edema of the nerve head at times.

September 24, 1935, the nose and throat examination showed nose red, with dry mucous membrane, no free pus, and high, thickened septum. The antrum lavage was negative. There was extreme mental depression, also marked frontal headache. On December 5, 1935, the Caldwell-Luc operation was performed, with complete removal of membrane. An encapsulated abscess was found on the floor of the left antrum. The general mental and physical condition improved, and on June 16, 1936, a submucous resection, curettement of anterior and posterior cells, was done. No changes were noted in sphenoid mucous membrane.

*Case 6*—E R, woman, aged 21, was seen December 2, 1928. The diagnosis was retinitis proliferans. Three years previously the patient noted spots in front of the right eye, and the vision gradually failed. Last August the left eye became involved. The patient had frequent nose bleeds and complained constantly of a pain at the root of the nose. The examination showed in the right eye, hand movements only were visible, left eye, 20/200. Ophthalmoscopic examination showed well-developed retinitis proliferans in both eyes. December 14, vision was 7/200 in left eye, February 4, vision 20/200. May 26, 1930, vision on right was much clearer, and with corrections she had 5/100 vision on the right and 20/200 on the left. This patient is still able to play cards, enjoy movies, and goes about by herself, and the condition has remained stationary for the last seven years.

There was a history of repeated colds and post-nasal discharge and several attacks of tonsillitis. The nasal examination showed high, thickened septum and both middle turbinates in contact with nasal wall. There was no pus present. The posterior tips of the middle turbinates were slightly thickened. The tonsils were large and cryptic. On December 6, 1928, a submucous resection and a bilateral exenteration of the anterior and posterior ethmoidal cells was performed. Some polyposis was present. The sphenoids were explored, and the anterior walls were taken down. A tonsillectomy was done three weeks later.

*Case 7*—J J L, man, aged 43, was seen January 23, 1931. Five days before, the patient noticed spots in front of his right eye. Examination showed the patient had a right convergent squint, with a large central scotoma in the right eye. The left eye showed 20/20 vision. The retinal appearance apparently was normal in both eyes. The general physical examination was negative with Wassermann negative. The patient was referred to a rhinologist who found

an infected antrum on the right side, which was operated on. The scotoma cleared up, but the vision did not return to normal, probably due to the fact that the right eye was an amblyopic eye.

*Case 8*—S E W, woman, aged 47, was seen February 9, 1928. The patient's general health had not been good. Her eyes had been bothering her for seven or eight months. She complained of black spots in front of both eyes, and for the past six weeks had been unable to read at all. Infected tonsils had been removed and patient had been hospitalized and studied in two different hospitals. In one hospital the diagnosis was neurosis. The examination showed vision, right eye, 8/200, left eye, no vision. There seemed to be a normal peripheral field in the right eye and slight constriction of the peripheral field in the left eye, with a large central scotoma in each eye. As all examinations in the hospitals showed negative findings, the patient was referred to a rhinologist who performed an operation. The day following the operation, the patient lost the peripheral field in both eyes. Total blindness existed for about five or six days, then the vision began to return. On March 6, 1928, with correction, the patient read 20/30 in the right eye and 20/70 in the left eye and was able to read large reading type. May 8, 1928, the vision was 20/30 in each eye. August 6, 1928, corrected vision was 20/10 in the right eye and 20/20 in the left eye, with reading correction No 6 on the near point card with each eye.

The nasal history was indefinite with the exception of postnasal drip and intermittent attacks of dull headache, lasting several days at a time and more marked on the left side. Examination showed hypertrophy of both middle turbinates, no pus seen. February 14, 1928, a resection of the middle turbinates and curettement of the anterior and posterior ethmoidal cells was performed. The left sphenoid was explored. The mucous membrane appeared to be slightly thickened and the anterior wall was taken down.

*Case 9*—H T D, man, aged 23, was seen March 1, 1928. Two days before, the patient was struck over the left eye by a piece of wood. The pupil was dilated and fixed but with no fundus changes. There was slight edema of the nerve on the left side. The patient had only light perception. Four days later, vision was 20/50. March 13, the patient returned with vision again gone in left eye and an acute upper respiratory infection. He was referred to the hospital for observation and examination. The physical examination was negative except for nasal findings.

On March 13, 1928, there was the nasal history

of recent severe coryza. Examination showed marked hyperemia and swelling of the nasal mucous membrane throughout. The septum was thickened, with marked high obstructive deviation to right. The tonsils had been removed. An acute pharyngitis was present. Headache was marked throughout left side of head. The patient was referred to the hospital where, after energetic conservative treatment, the acute conditions quieted down to a point where it was considered safe to institute operative procedures. March 26, 1928 a submucous resection and curettement of anterior and posterior ethmoidal cells was performed. Sphenoid was inspected and no pathology found. On April 10 the eye condition was 20/70 vision in the left eye, and on April 17 vision had returned to 20/20.

*Case 10*—D M., man, aged 20, was seen January 5, 1929. On December 27 the patient slipped and fell, striking the right eye on a grease cup. The vision was lost, but gradually returned. The examination showed no exophthalmus, the right conjunctiva showed some slight hemorrhage, and there was some swelling of the right cheek below the eye. Vision in the right eye was 6/200, left 20/30. On January 14 there was some slight exudate in the macula of the right eye, with vision 8/200. On January 17 vision was 20/200. He was referred for nasal examination, and the rhinologist reported some trouble in the nose. On January 10 one tooth was removed, with no improvement in the eye. On January 29, 1929, vision in the right eye was 20/100, and on February 5, vision was 20/70. On April 10, a submucous resection was done, also a curettement of ethmoidal cells and sphenoid sinus was performed. On May 4 the corrected vision was 20/25, showing an improvement.

### Comment

The decision to advise a radical nasal operation in these cases involved a responsibility. It was made only after conservative treatment of the nose failed to improve the eye condition, also, only after a thorough general physical examination by an internist ruled out all other possible foci of infection.

We have demonstrated to our satisfaction that there is a type of nasal sinus infection that causes eye complications of a severe nature. This sinus infection is not accompanied by purulent secretion.

### Discussion

Dr Conrad Berens, *New York City*—It is a privilege to be permitted to discuss this excellent

paper on a subject of the greatest importance not only for ophthalmic therapeutics but also for the prevention of blindness, 72 per cent of which in the United States is caused by chronic disease. It would be impossible to summarize, even briefly, the many cases that apparently have been improved by sinus surgery either alone or usually in combination with general medical treatment, especially autogenous bacterial antigens.

Surgery in some cases is imperative, but I always prefer to see what results can be obtained by thorough medical and nasal treatment combined with immunology. These patients should be studied for allergy to allergens other than bacteria. However, to me the importance of the bacterial findings is increasing as our methods of bacteriologic diagnosis become perfected. Furthermore, as our knowledge of the viruses increases, we have another important approach to this perplexing problem pertaining to chronic inflammation of the uveal tract. We are now able to make studies of the nasal secretions for the influenza virus but so far have found no virus in relation to chronic recurring uveal lesions.

The essayists have wisely stressed the importance of a carefully taken history that should begin with childhood. In my experience most of the inflammations of the uveal tract are not caused by tuberculosis, and I go even further in believing that tuberculous lesions of the uveal tract are rare in private practice in New York City.

While I agree that a positive Wassermann reaction is valuable for diagnostic purposes, naturally a positive reaction does not necessarily mean that the eye lesion is syphilitic. I have had several patients who, in spite of treatment of the syphilitic infection, also required treatment of their sinus infections. In several cases in which I was not sure of the etiologic diagnosis, the lesion later was apparently proved to be gonorrheal. We should always be on guard for the presence of other chronic infections, e.g., undulant fever [Green, J. Tr. Am. Ophth. Soc. 36: 104 (1938)] or the so-called focal infections.

In the production of lesions of the uveal tract much stress has been placed on streptococci, and our experimental work [Berens, C., Angevine, D. M., Guy, L. and Rothbard, S. Am. J. Ophth. 21: 1315 (1938)] seems to demonstrate the importance of streptococci. In our most recent work, which is as yet unpublished, the importance of mildly pathogenic types of streptococci in the production of serious experimental lesions apparently is shown.

We have pointed out elsewhere [Berens, C.,

Nilson, E L, and Chapman, G H Am J Ophth 19 1060 (1936)] that experimental lesions of the uveal tract may be caused by several types of bacteria often found in cultures made from suspected foci of infection. Some of our most serious eye lesions have been associated with observations of colon bacilli in the upper respiratory tract and we are now making a more complete study of the subject. One patient (Miss C C, aged 35, first seen on September 21, 1936) had iritis in the right eye with secondary glaucoma and infection of the right ethmoid. Aerogenes and negative streptococci were found in the nose. In the throat, there were toxic and negative streptococci. A small portion of the left middle turbinate was removed. This patient was apparently improved by aerogenes vaccine, for she has had no further attacks of iritis.

One patient (Mr H B, aged 40+, first seen April 21, 1938) was told that his right eye would never regain the vision it had lost. At the time of the first examination vision was 20/40 but the central interstitial corneal opacities unexpectedly cleared after autogenous antigens (*Staphylococcus aureus* and *B coli*) were given and the sinuses were treated. After a year's treatment of the sinus condition, progressive mild inflammation with infiltration of the substantia propria developed in the periphery of the cornea of the right eye. Bilateral ethmoidectomy and sphenoidectomy combined with opening of the left antrum has so far quieted the condition. Cultures showed colon bacilli in the ethmoids.

The more one studies the staphylococcus the more one is convinced that this organism also is an important factor in eye lesions involving the uveal tract. We have been interested in developing *in vitro* tests [Chapman, G H, Berens, C, Nilson, E L, and Curcio, L G J Bact 35 311 (1938)] for determining the toxicity of staphylococci and other organisms and have applied these tests to the study of the staphylococcus in the nose and conjunctiva in patients with eye lesions. In a small series of eye and nasal cultures, we found staphylococci of similar toxicity in both eye and nose in about 50 per cent of the cases. In another 25 per cent the same organisms were found in both, those in the nose being more toxic.

One patient (Mrs W M, aged 42, first seen August 9, 1922) with bilateral chronic iridocyclitis and secondary glaucoma, who had been treated by ophthalmologists in several countries, apparently was benefited by a bacteriophage made from the staphylococci obtained from nasal cultures and by opening all her sinuses. In each

sinus that was opened, *Staph aureus* in pure culture was found. The eyes finally quieted completely, and vision was retained.

Another patient (Dr A R M, aged 59, first seen November 5, 1926) developed inflammation in his right eye following a cold contracted two weeks after cataract extraction. His symptoms, which persisted for one year, were pain, tearing, marked photophobia, and keratitis with vascularization of the iris and cornea. Enucleation was advised by two ophthalmologists. After most conceivable treatments were used an ethmoid cell was opened and a pure culture of *Staph aureus* was obtained. Following this operation, the eye quieted, and he was relieved of his sensitiveness to all mydriatics and cycloplegics. A year later iridocapsulotomy was performed and vision was restored from hand movements to 20/70.

Another patient (Mr D S McN, aged 26, first seen in 1932), who was sensitive to all the mydriatics and miotics, had pansinusitis, bilateral chronic iridocyclitis, and central chorioretinitis. His eyes were better for a year while autogenous streptococcal toxic antigen was being administered. However, he developed recurrences two months after this antigen was discontinued. He was seen by Dr Wilmer, who considered it a tuberculous lesion, and the last report indicated that he was doing well on tuberculin treatment.

This case is reported in contrast to another patient (J P, aged 15, first seen April 20, 1933) whom we suspected of having chronic sinusitis because of the appearance of the right side of his nose. He had been treated for two years with tuberculin and taken to a southern climate because of tuberculosis. But after giving him an autogenous streptococcal vaccine that was not a particularly virulent organism, he went back to school in the north. The boy's vision, which had been 10/200 for many months, gradually returned to 20/50. The chorioretinitis slowly quieted at the same time as the appearance of the nasal membranes improved. No operation was performed on his nose or sinuses, although a septum operation was advised.

We have recently seen two patients with parenchymatous keratitis that reduced the vision to 20/100 in one patient and to hand movements in the other with beginning involvement of the cornea of the other eye in both patients. Chronic infection of the antrums was found in both cases on the side of the serious involvement of the cornea. Chronic hyperplastic ethmoiditis was also diagnosed on both sides.

One of these patients (Mrs C M, aged 21,

first seen on March 1 1939) had light perception in the right eye caused by parenchymatous keratitis and beginning uveitis in the left eye. The uveitis began to clear in the left eye as soon as the sinuses were operated upon. Cultures from the right nostril and the left nasal passages showed the presence of many hemolytic *Staph aureus* which were toxic according to all *in vitro* tests. A culture from the nasopharynx also showed a moderate number of toxic hemolytic *Staph aureus* as well as a few highly toxic streptococci.

We see a number of patients, particularly after ethmoidectomy, who develop inflammation when some of the ethmoid cells become blocked and who improve with drainage of these cells, even one or two exceedingly small cells. This possibly points to the fact, which we have noted experimentally, that sensitization is important in the production of ocular disease because experimental lesions develop more consistently in sensitized animals.

Many of our patients have improved both with and without operation for retrobulbar neuritis. In our experience only one patient (Mrs. J. W. M., aged 41, first seen January 17, 1927) who was advised to have a nasal operation because of retrobulbar neuritis, possibly lost reading vision. Her general physician told her never to have sinus surgery, and she was taken to Florida. She failed to regain her central vision in the affected eye.

I also believe that patients who have inflammatory chronic congestive glaucoma should be carefully studied for chronic upper respiratory infection. We have had several cases in which repeated eye operations were unavailing and relief was obtained after opening the sinuses.

One patient (Mrs. R. M., aged 27, first seen April 4, 1930) had ten major operations for glaucoma as well as two paracenteses and two aspirations, which did not control the tension. We finally persuaded one of our colleagues, much against his will, to open her sinuses. An advanced stage of chronic inflammation of both ethmoids was found.

This particular subject of chronic, so-called focal, infection has occupied so much of my thought for so long that my opinion is probably biased when I say that it is the most important problem in the prevention of blindness in the adult population at the present time.

However, I am sure that we are deeply indebted to Dr. Barber and Dr. McNamara for giving us the benefit of their rich experience.

Dr. Mortimer G. Brown, *Syracuse, New York*—  
There are at least two very good reasons why a

paper on the subject of the accessory sinuses and the eye is timely and interesting.

It is timely because there is relatively little on the subject in rhinologic literature, most of the contributions are to be found in ophthalmologic writings principally because the oculist takes the responsibility of his patient's vision more seriously than the rhinologist, who in these cases, acts more as a technician than a surgeon following his own judgment. The subject is interesting because it always provokes discussion.

This particular presentation is worthy of our consideration for several reasons.

First, the authors have presented their cases in a modest and sincere manner, with no claim to priority or indication that their request for surgical intervention has been urged—both of which are commendable and refreshing.

Second, they emphasize that the presence of frank pus in paranasal sinus conditions is not necessarily a requisite to the diagnosis of sinus pathology—congestion within these cavities is unquestionably of greater significance than an area of inflammation normally ridding itself of secretions. In many eye conditions it is the concealed or latent type of infection that is the more serious.

Third, if this case report can be considered a criterion as to the frequency of eye conditions requiring more or less radical nasal surgery, it is evident that the average rhinologist may be expected to be called into the case only occasionally, and then merely with the hope that his ministrations may be of some benefit. This relieves the nervous tension of the nose and throat surgeon who is in the habit of attacking foci of infections upon the assurance of the internist that removal of such foci is all that is necessary to cure the patient who never has been and never will be free from various vague complaints.

That certain eye diseases are apparently cured, or at least improved by free drainage and aeration of the accessory sinuses, is indisputable. The results obtained by the authors in their cases offer no controversy. Both the ophthalmologists and rhinologists responsible for this series of cases are to be congratulated—for working together, they have preserved that special sense most cherished by all. Even a relatively small series of this class of cases operated on without disturbing complications justifies commendation.

However, if we were to aver that a majority of the three conditions affecting the uveal tract would respond to nonsurgical or conservative treatment and that radical procedures are needless surgery, then controversy and sharp debate is engendered!

The essayists do not state the nature of the

conservative care applied in their cases. If conservatism means the application of the argyrol pack and the prescribing of any one of the fifty-seven varieties of the overheralded nose drops, then I agree that no improvement need be expected. To me, conservative treatment includes any simple method aimed to establish normal function of the nasal passages in order to relieve sinus block, such as a careful correction of septal obstruction or the judicious removal of turbinal hypertrophy, together with certain approved methods of reducing tissue congestion. This may be medication applied as near as possible to the natural sinus ostiums or any of those therapeutic measures coming under the classification of heat treatment diathermy, the "short wave," ionization, the therapeutic lamp, or just the use of medicated vapors and hot wet packs.

Curettage of the ethmoid cells and sphenoid sinus without a very definite indication I prefer to leave to the daring statistician or the man who thus far has been favored by good fortune.

Some of you may recall a statement by Dr

W L Benedict that, "improvement in optic neuritis following sinus surgery may be due to hyperemia resulting from the packing and reaction of the operation, or inoculation by absorption of blood, rather than to the operation per se, and that, by packing the nose once or twice daily with epinephrine and cocaine, allowing these packs to remain in place for 3 hours, hyperemia can be induced for a longer time and is as effective as operation on the sinuses."

Quite likely Dr Benedict leans too far to the left, but somewhere between the nihilist in sinus surgery and the vampire type of operator who exhibits more technical dexterity than surgical judgment, there falls the vast majority of rhinologists whose experience has taught them that the sphenoethmoidal region occasionally requires radical surgery but should be approached with real caution.

Again, may I congratulate Drs Barber and McNamara upon their work and its presentation.

To the enthusiast in accessory sinus surgery, young or mature, the aphorism of Jackson is ever apropos—"Before undertaking any surgery, be sure you are right, but not *too* sure."

#### SURGEON'S SECRETARY

I'm not the one who does the deed,  
Nor kin to that sadistic breed,  
I do not like to watch men bleed  
But I must earn my clothes and feed

I fix the words he cannot spell,  
Of ether I abhor the smell,  
I watch his patients go through hell,  
I hear their secrets and don't tell

I send them bills that cause dismay,  
And then I hound them 'till they pay,  
I keep them waiting half the day,  
Then ask them "How are you today?"

I'm well informed about the rain  
Or sun, and what's occurred in Spain,  
I tell them there will be no pain,  
And when can they come in again?

His penmanship has ruined my sight,  
His instruments blanch me with fright,  
I pound out letters half the night  
And hope I'm spelling 'hemorrhage' right.

Sometimes I get it in the neck,  
And then I think I'm through, by heck,  
But Wednesdays I make out my check,  
And that restores my self-respect

—E W J, *Massachusetts*, in the *J.A.M.A.*

#### DOMESTICS' EXAMINATION IS NEGLECTED

"Existing health regulations in most communities still neglect in large measure the safeguards for the health of children in regulating and demanding physical and laboratory examinations of domestics associated with children or engaged in the handling of foodstuffs," the *Journal of the American Medical Association* for January 27 declares.

"Recently there has been renewed interest in the public health aspects of domestic service and in attempts to minimize the health hazards incident to domestic employment by periodic examinations," the *Journal* states. "Additional emphasis is given to this problem by the

recent report from the director of public health, San Francisco, of four domestics revealed to be typhoid carriers in 1939. In each instance the carrier was identified after the development of typhoid in the family or, in one instance, in the cafeteria in which the domestic was employed. None of these four carriers ever gave a history of having had the disease. Such circumstances merely serve to re-emphasize facts already well known, namely, that only healthy adults should be in contact with children or for that matter with other adults."

The suggestion has also been made that the families be examined, to protect the domestics

# DERMATITIS NODULARIS NECROTICA

## Report of Three Cases

EUGENE TRAUGOTT BERNSTEIN, M D , New York City

(Attending Dermatologist, Beth David Hospital)

THE purpose of this report is to indicate the importance of recognizing dermatitis nodularis necrotica as a distinct skin eruption when it is seen in general practice. It may be difficult to establish a diagnosis due to protean manifestations masquerading as a number of dermatoses extending from a simple acneiform eruption to a necrotic type of tuberculosis.

Dermatitis nodularis necrotica was first described by Werther.<sup>1</sup> In reporting a fatal case of this disease in 1936, Duemling<sup>2</sup> noted that up to that time only 31 cases had been recorded.

Clinically, dermatitis nodularis necrotica may be recurrent and polymorphous, and it may or may not be accompanied by constitutional disturbances. Gougerot<sup>3</sup> properly emphasizes the varying degrees and transitional forms to be found. In the mildest cases there will be seen nonnecrotic nodules, erythematous papules, and some purpuric elements, but the severe cases present large nodules which may ulcerate and become necrotic.

The multiform nature of the disorder, which tends to occur in crops, is indicated by the individual lesions which include vesicles, macules, papules, papulonecrotic lesions, ulcers, nodules, plaques and their sequelae, hemorrhagic and ulcerative lesions. The resultant scars may be atrophic or hypertrophic.

The sites of predilection of the lesions are the back, the extensor surfaces of the hands and feet, the knees and elbows, the palms and soles. Hemorrhagic papules and petechiae select the extremities, especially the hands and feet where they may involute leaving no trace.

### Etiology

The etiology of dermatitis nodularis necrotica is still in dispute. Duemling

observed that the majority of the 31 cases he collected showed evidence of tuberculosis. Nine, however, were definitely nontuberculous. The latter were regarded as septic or embolic. It was in this group that he placed his own case which had come to autopsy. Eichenlaub's<sup>4</sup> case was similarly nontuberculous. Fischl<sup>5</sup> was contrary minded, for in his analysis he insisted that all cases reported up to 1931 were really papulonecrotic tuberculids. He concluded that all cases called dermatitis nodularis necrotica were actually papulonecrotic tuberculids and should be classified in the latter group despite negative histopathologic findings. Poór<sup>6</sup> recommended the term "tuberculosis nodosa hemorrhagica" which would thus differentiate the lesions from papulonecrotic tuberculid while emphasizing the hemorrhagic features as well as the reputed tuberculous origin.

Gougerot<sup>3</sup> and his associates believed that numerous organisms, notably the tubercle bacillus, the pyogenic cocci, Hansen's bacillus, various fungi, and spirochetes may cause variable skin disorders. Conversely, in dermatitis nodularis necrotica he maintains the etiologic agent may be the tubercle bacillus, the streptococcus or the staphylococcus. Hallopeau,<sup>7</sup> Du Castel,<sup>8</sup> Balzer, and Milian considered their moderately severe cases to be of tuberculous origin. Finally, Duemling observed "Dermatitis nodularis necrotica may be regarded as a septic form of erythema multiforme, caused in some cases by the tubercle bacillus and in others by septicopyogenic organisms."

### Histopathology

Duemling,<sup>2</sup> in the report of his fatal case, stated that the nodular lesions presented the picture of a massive infiltrate





FIG 1 CASE E D Shows multi-form and transitional lesions nodules, vesicles, crusts, punched-out ulcers, and the terminal atrophic scar

extending from the papillary bodies to the coil glands. Considerable hemorrhage was scattered throughout, especially beneath the flattened papillae. The cells of the infiltrate were mainly polymorphonuclear leukocytes. In addition, vascular dilatation and perivascular infiltration were present. From a histopathologic point of view, he regarded this picture as that of an acute purulent infection involving the corium and cutis. The superficial lesions evolved more rapidly and healed by desiccation and exfoliation. The nodular lesions evolved more slowly, though they developed into ulcers which healed with scar formation. A septic or embolic process was considered by him to account for these changes.

Two other histopathologic reports may be repeated here with benefit since they clearly elucidate the microscopic features usually found in this disorder. Werther's case exhibited endarteritis with acute inflammatory changes in the cutis which were accompanied by hemorrhage, abscess formation, and necrosis on and about the sweat glands. These were interpreted as being due to hemorrhagic infarcts with embolic plugging of the end-arteries. The section in Klingmüller's<sup>9</sup> case manifested perivascular infiltration particularly in the subpapillary layer (polymorphonuclears), there was infiltration and milary abscesses in the epidermis while both the

cutis and papillae contained hemorrhages.

In my cases the histologic examination revealed a milder grade of inflammation with moderately dilated blood vessels in the cutis. There was a concomitant round cell accumulation, subepidermic edema and acanthotic changes in the epidermis. None of these 3 cases showed indications of severe sepsis.

### Differential Diagnosis

This disorder is most frequently confused with papulonecrotic tuberculid. Fischl and others consider it to be identical with the latter. Poór's case was regarded as a dermatitis nodularis necrotica, but he stated that in certain phases it reminded one of lupus pernio, multiple benign sarcoid, angiokeratoma, purpura nodosa, and papulonecrotic tuberculid. Andrews<sup>10</sup> lists another group, including ioderma, leukemia cutis, papulonecrotic tuberculid, and erythema multiforme. It is apparent that a definite diagnosis may be impossible without a histopathologic study of a biopsy.

In reviewing my series of cases, I note that I have had to consider the following clinical diagnoses as well: parapsoriasis, pyoderma, erythema induratum, and drug eruption. This wide variety of differential diagnoses indicates the transitional character of the lesions under discussion. It is not unlikely that the list will grow with further reports. Thus, in Fink's case, neurotic excoriation was borne in mind by some of the discussers.

Fortunately, the prognosis of dermatitis nodularis necrotica is good except in the very severe type which shows signs of sepsis. At present the treatment is entirely symptomatic in this self-limited disorder, though it should be remembered that many consider injections of arsenic almost a specific in those cases which are regarded to be of tuberculous origin, e.g., Werther, Gougerot.

### Case Reports

Case 1 —E D, female, aged 59, presented herself on March 9, 1939, with a generalized eruption of one-week duration, though it had been present over the backs of the legs for four weeks.



FIG 2 CASE A G Medium power Vascular dilatation with small round cell infiltration and subepidermic interstitial edema are clearly shown. This picture of an early inflammatory process surrounding the blood vessels must be taken in conjunction with the clinical picture if a diagnosis is to be established at this stage

The individual lesions were more sparsely scattered over the body than over the lower extremities. The lesions were discrete, fairly sharply margined, and consisted of transitional forms starting with superficial nodules, extending to erythematous papules, many of which appeared with superficial punched-out ulcers. The terminal results were faintly pigmented varioliform scars.

There were no concomitant symptoms of note.

The differential diagnosis included (1) dermatitis nodularis necrotica, (2) papulonecrotic tuberculid, (3) parapsoriasis.

On April 5 and 10, specimens for biopsy were taken from the left leg.

Dr D L Satenstein and Dr Wilbert Sachs submitted the following histopathologic report:

"Microscopic Diagnosis Early state of dermatitis necroticans (Duemling)

"Throughout the mid and upper cutis the vessels are dilated and the walls somewhat thickened. About these is a moderate small round and wandering connective tissue infiltrate



FIG 3 CASE A G Low power Vessels of the mid and upper cutis are moderately dilated and about them is a moderate small round cell infiltration. Note appreciable subepidermic interstitial edema. Irregular acanthosis in epidermis which also shows a necrotic area.

In the upper cutis, there is a marked interstitial edema and in a few areas in the subepidermic region there appears to be some necrosis. The epidermis is somewhat acanthotic, but otherwise shows no important change."

Wassermann reaction was negative. Pirquet and Mantoux tests: 0.1 cc of tuberculin in dilution 1:1000—negative, 0.1 cc of tuberculin in dilution 1:100000—positive, 0.1 cc of tuberculin in dilution 1:1000000—slightly positive.

Other laboratory tests were negative.

Case 2—A G, female, aged 28 was seen on obstetrical service of Beth David Hospital.

The areas essentially involved were the antero-lateral aspects of the upper and lower extremities.

The individual lesions were both papular and depressed and exhibited all transitional forms from nodules to excoriations and collarette forms. As in Case 1, the end results were varioliform scars. During the phase of resolution the lesions had a sepia-brown color.

In this instance there was little or no itching though the patient was tempted to "pick" at the individual lesions.

The differential diagnosis included (1) parapsoriasis, (2) neurotic excoriations, (3) papulonecrotic tuberculid, (4) dermatitis nodularis necrotica. The last was accepted as a tentative diagnosis.

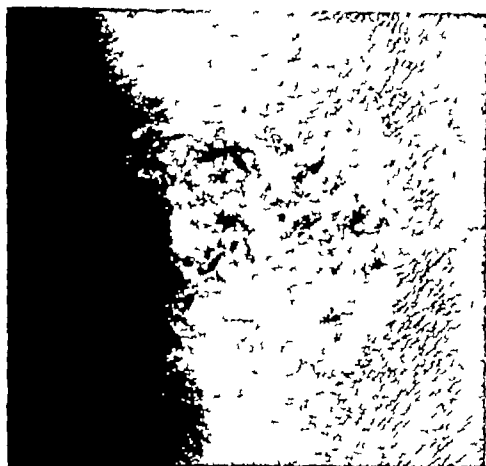


FIG 4 CASE L R Shows necrotic, ulcerated, confluent nodules on leg. Note surrounding induration and erythema

A specimen for biopsy was removed on May 2, 1939. Dr D L Satenstein and Dr Wilbert Sachs submitted the following histopathologic report:

**Microscopic Diagnosis** Early dermatitis necroticans

"The vessels of the mid and upper cutis are moderately dilated and about them there is a moderate small round cell infiltration. In the subepidermic region there is considerable interstitial edema. The epidermis is irregularly acanthotic and at one point, there is a necrotic area. Otherwise there are no important changes."

As in the first case, this patient had a positive tuberculin reaction to 0.1 cc. in dilution 100,000, and 0.1 cc. in dilution was 1,000,000.

Wassermann reaction was negative.

Other laboratory tests were negative.

**Case 3**—L R, female, aged 33, was a patient in Beth David Hospital from May 29, 1939 to June 24, 1939.

**Family History** Mother had died of 'dropsy' and the father of typhoid. Four brothers and three sisters were living and well.

**Personal History** During childhood, patient had had diphtheria, pertussis, and chicken pox. As far back as she could remember she had suffered with constipation for which she took laxatives habitually. In 1937 she observed pus and blood coming from the anus. At Bellevue Hospital this was attributed to a fistula-in-ano which was treated operatively. Though the hemorrhage ceased, the discharge of "pus" continued, and she returned to the Bellevue clinic where she received "injections" for six months. The nature of this medication has not been de-

termined. In the fifth month of her treatment at the clinic, she began to develop 'boils' on her back and legs. The back lesions would last from 2 to 3 days, but those on the legs remained for intervals from one to six months. This history of recurring lesions has persisted to the present, the "pus" per anus also continues.

The patient complained of tiredness, sleeplessness, and "nervousness." Her menses recur every two or three weeks and last for two or three days. There has been no sweating, notable loss of weight, or pyrexia. Since May, 1939, transitory joint swellings have occurred.

Radioscopy, fluoroscopy, and electrocardiography confirmed the presence of a dextrocardia in this patient.

**Laboratory Data** rbc was 3,530,000, wbc was 4,200. Routine urinalysis was essentially negative. Wassermann reaction was negative. However, increasing concentrations of tuberculin up to dilution of 1:1000 were all negative.

**Cutaneous Examination** the areas involved were both lower extremities and the back. These areas showed numerous furuncles in all stages of development, as well as flat pyodermic lesions which were nonelevated. On the lateral aspect of the left leg, about five inches above the malleolus, were several dime-sized ulcers which later fused. They had sharp irregular edges with tender erythematous bases. Sticking, needle-like pains were present in this lesion. A scar of a previous lesion was present about three inches above the latter. During her stay in the hospital a papulopustular lesion developed over the back. This was a periodic occurrence which would persist for about two weeks with subsequent resolution. Later discrete ulcerative lesions appeared over the lateral surfaces of the legs and calves.

Digital examination of the rectoanal area revealed a vertical induration along the anterior wall of the anal canal. Visual inspection of this area revealed the presence of an erythematous fissure, covered with a mucopurulent discharge.

The differential dermatologic diagnosis included (1) dermatitis nodularis necrotica, (2) pyoderma, (3) erythema induratum, (4) drug eruption.

A specimen for biopsy was removed from the leg and the histopathologic report was submitted by Dr D L Satenstein and Dr Wilbert Sachs.

**Microscopic Diagnosis** Perivascularitis with hyaline degeneration and tuberculoid tissue.

"The vessels of the entire cutis are dilated and about them is a marked cellular infiltrate. The lining of the vessels are swollen and the walls edematous, and in places there is breaking up of the wall. In the center of the section is a

marked cellular infiltrate composed of small round cells, wandering connective tissue cells, histiocytes and giant cells. There is some necrosis present in this zone. There is hyaline degeneration of the collagen fibers within this area. There are no true tubercles. The epidermis is irregularly acanthotic but shows no important changes."

The microscopic diagnosis in this case differs from that of the first two. Though all 3 cases were examined by the same pathologists the microscopic findings appear essentially similar to me and correspond with the histopathologic findings of dermatitis nodularis necrotica. I am accordingly prompted to include the last case in this series.

### Comments

The term "dermatitis nodularis necrotica" is purely descriptive and gives no indication regarding the etiology of this disorder. The literature exhibits ample testimony of the reluctance with which it has been linked with tuberculosis even though numerous cases in which it has been found coincident with tuberculosis have been reported. Some like Fischl have held a brief for its identity with papulonecrotic tuberculid, others, like Werther, thought it belonged in a special category quite independent of all others. Latterly, Duemling has seen fit to divide this disorder into two groups. In the first, tuberculosis can be reliably considered as an etiologic factor, and, in the second group, tuberculosis can be excluded. This does not assist us once tuberculosis can be excluded. As usual, the pyogenic series of organisms have been called upon to explain this second group without any evidence to support the theory except a few isolated cultures. It is questionable whether these pyogenic organisms have a significance other than that of secondary invaders in areas of lowered resistance. I am inclined to regard these theories concerning the etiology of dermatitis nodularis necrotica as purely speculative.

In 1933, Gougerot and his co-workers reported a series of cases belonging to the nodular dermatitides. Their observations tend to break down the rigid classification which has been attempted for this group

of disorders. As already emphasized, they consider dermatitis nodularis necrotica as a syndrome with diverse etiologic factors. As an arbitrary group, it may be inserted between such groups as dermatitis nodularis nonnecrotica, examples of which may be found in indeterminate chronic septicemias, and those nodular dermatitides in which the lesions always become necrotic, the latter may be illustrated in the escharotic tuberculids.

From a clinical point of view there is some justification in preserving this classification especially when the pathogen cannot be determined, not only because of the interest which is shown in the mechanism which produces this lesion, but also because of the favorable prognosis which it entails. As soon as a definite etiology can be established a more precise nomenclature is inevitable.

All these dermatoses, whether or not they are polymorphous, manifest the nodule as a lesion common to all.

It may be, as Gougerot insists, that a microbic embolus is responsible for the nodule when it is arrested in the mid or deep cutis, or it may cause an erythematous papular plaque when the superficial skin is involved. Local anaphylactic reactions may explain the *modus operandi* of the lesion. In a sense, therefore, these nodular dermatitides do belong to a pathogenic group, that of the "allergic" dermatoses.

Bearing this concept in mind, a prognostic element is deduced which, in some respects, appears paradoxical. The defensive reaction is directly related to the intensity of the cutaneous reaction. It is more favorable when the lesions are more numerous and the reactions more intense in the skin.

However, all these theories and conjectures lack conclusive confirmation despite the fact that they are seductive. To my mind this lack of confirmation presents us with an etiology which is as yet undetermined. The disorder might very well be a metabolic disturbance with skin manifestations. The paucity of reported and studied cases will not simplify the problem of elucidating these

questions It is conceivable that pyogenic organisms found in the reported cases are merely secondary invaders in areas of lowered resistance as they frequently are in agranulocytosis, diabetes, and the whole gamut of metabolic disorders

### Summary and Conclusions

1 The incident of dermatitis nodularis necrotica is rather frequent, but is seldom diagnosed as such, therefore, less than 50 cases have been recorded to date

2 The clinical signs, symptoms, and theories concerning etiology, histopathology, differential diagnosis, prognosis, and treatment are discussed

3 Three case reports with histopathology are described

4 An analysis of the theories pertaining to etiology leads me to believe that the causative agents are still unknown

100 Central Park South

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### AMERICAN WOMEN ARE GETTING THINNER

For many years the public has been steadily bombarded with propaganda concerning the perils of obesity Much of it is based on sound statistical evidence of the shorter longevity and greater liability to certain types of disease shown by overweight people

The inevitable result is now evident in the figures of average weights of women insured in the Ordinary Department of the Metropolitan Life Insurance Company As reported in the *J A M A*, the tabulation of the average weights at various heights according to age in 1922-1923 as compared to those in 1932-1934 showed that in all but a few instances there has been a decline in the average weight for each height at

every age The extent of the declines is not large and is usually from 3 to 5 pounds

It is perhaps surprising, however, that the declines are fairly uniform for the various ages and have been as great for older as for younger women It would be rash, however, to ascribe the general decline in the average weights of women exclusively to the influence of health education, and fashion, since modifications in eating habits represented by a gradual change from the emphasis on quantitative caloric needs to the present consideration of qualitative needs, which stresses the value of so-called protective foods, has also occurred in an apparently quite independent manner

### CHANGE OF ADDRESS

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# BENIGN INTRAVENTRICULAR TUMORS OF THE BRAIN

## Report of Three Cases\*

ELDRIDGE CAMPBELL, JR., M.D., and ROBERT WHITFIELD, M.D., Albany, New York

(From the Department of Surgery of the Albany Medical College, Union University)

THE purpose of this paper is to call attention to a small but fascinating group of brain tumors growing within the ventricular system. Many of these growths are benign,<sup>1,2</sup> and since it is now possible to remove most of them surgically, their diagnosis is of considerable importance. As a general rule, the earlier and principal manifestations of such growths are those of increased intracranial pressure, consequent to the blocking of a ventricle. Not infrequently this is intermittent, at least at first, and indeed has been known to remain so for years.<sup>3</sup> When obstruction becomes complete, the familiar manifestations of elevated pressure (such as headaches, nausea, vomiting, choked disk, etc.) become evident. Localizing signs due to pressure upon contiguous structures may appear earlier with fourth ventricular tumors than in those involving the lateral or even the third.

Rather than attempt generalizations concerning tumors of the ventricular system as a whole, the individual compartments will be considered separately.

### Tumors of the Lateral Ventricles

If one excludes invasive gliomas that bulge into the ventricles and malignancies of the choroid plexus, there remains a small group of circumscribed tumors that arise from the choroid plexus and from the walls of the ventricle. Papillomas of the choroid plexus,<sup>4</sup> fibrous tumors of the choroid plexus and tela, many of which Cushing and Eisenhardt<sup>5</sup> have shown to be meningiomas "without dural attachments," and ependymal tumors<sup>6</sup> have been most frequently encountered. If and when they grow to sufficient size

to obstruct the ventricle or to compress adjacent structures, symptoms appear. Cushing and Eisenhardt, in summarizing the clinical behavior of meningiomas of the superior tela, call attention to a "fairly characteristic syndrome" as follows: "(1) pressure symptoms with headaches tending to be ipsilateral, (2) a contralateral homonymous hemianopia often bisecting the macula, (3) a contralateral sensory motor hemiparesis more marked in the sensory sphere, associated in a few cases with trigeminal numbness, (4) symptoms suggesting cerebellar involvement in more than half the cases, and (5) almost invariably paralexia, increased by operation when the tumor, as it commonly does, occupies the left hemisphere."

The following case may illustrate the clinical behavior of these tumors.

### Case Report

*Case 1. Meningioma arising from the choroid plexus of the right lateral ventricle*—J. M., a 36-year-old, white, married housewife, entered the Albany Hospital, October 14, 1937, at the suggestion of Dr. E. W. Beard, Cobleskill, New York, because of severe headaches and of amenorrhea which had followed the birth of her fourth child, twenty-one months before. During this time she had become increasingly nervous and irritable. Following an excruciating headache ten weeks before admission, she had become stuporous, had vomited, and had remained in bed for thirty-six hours. Thereafter, she was again able to perform her household tasks, but it was noted that she would repeatedly ask foolish questions and appeared to be losing her memory. One week before admission she complained of failing vision. Two days prior to entering the hospital another severe headache occurred, accompanied by nausea and vomiting. During these last two days she staggered when attempt-

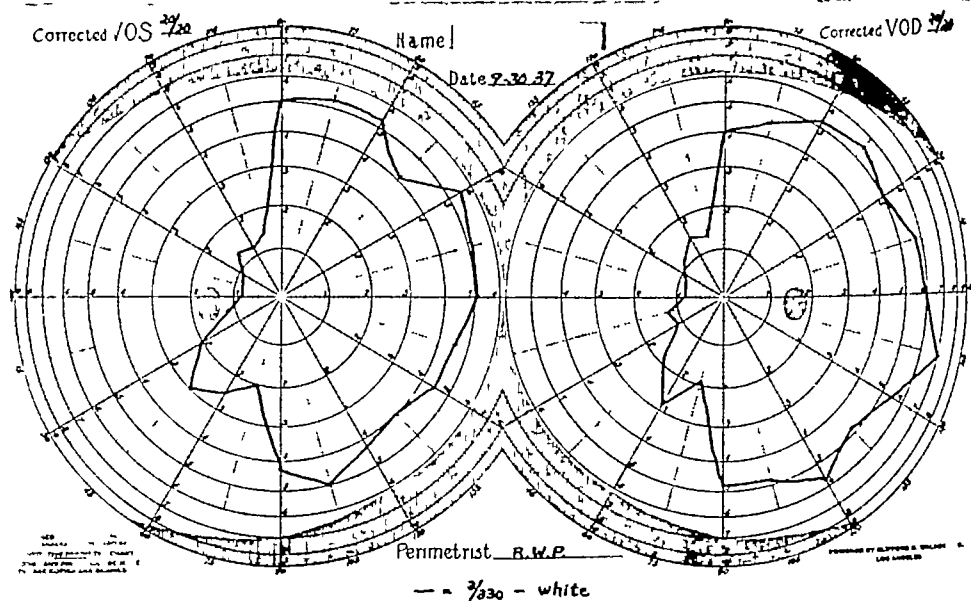


FIG 1 CASE 1 Visual fields showing left homonymous hemianopia

ing to walk and at times complained of numbness in the right side of the face

Family and past histories were noncontributory

Physical examination showed a poorly nourished, confused woman, who complained of frontal headache. The skull exhibited no tenderness or exostoses. The teeth were carious. The heart and lungs showed no abnormalities. The abdomen, pelvis, and extremities appeared to be normal.

Neurologic examination disclosed bilateral papilledema, more marked on the left. The visual acuity was 20/20 in each eye but there was a left homonymous hemianopia (Fig 1), with preservation of the macular areas. Slight weakness of the left internal rectus muscle was noted. No trigeminal anesthesia could be demonstrated but the jaw deviated somewhat to the left. There was a moderate facial weakness on the right, seemingly of the central type. Slight diminution of hearing was found bilaterally, with some loss of high tones in the left ear. No other abnormalities of the cranial nerves were demonstrable. She was disoriented for time, place, and person, no astereognosis was present. The speech was somewhat halting. Some clumsiness was noted in the left hand and foot in alternating movements. Dysmetria was observed in both finger-to-nose tests. The deep reflexes were slightly more active on the right than on the left. She walked on a wide base and showed

some difficulty in controlling the left leg. The Romberg was negative. She was right-handed.

**Laboratory Studies**—The red blood count was 4,500,000 with 88 per cent hemoglobin. The white blood count was 11,300 with 71 per cent polymorphonuclear leukocytes. The blood sugar was 95 mg per hundred cubic centimeters, and the N P N, 37 mg. The blood Wassermann and Kahn tests were negative. X-ray examination of the skull (Fig 2) showed enlargement of the sella turcica with atrophy of the posterior clinoid processes and of the floor of the sella.

**Operation**—October 15, 1937. Posterior trephine openings were made under local anesthesia. When ventriculography was being attempted, the needle inserted in the right ventricle encountered a hard mass at approximately 5 cm depth, just posterior to which 5 cc of xanthochromic fluid were obtained. A right occipital craniotomy was immediately performed and a 160-Gm meningioma arising from the right choroid plexus (Figs 3 and 4) was completely removed. For several weeks after operation the patient was irrational and ran an unexplained fever, these symptoms gradually subsided. At the time of discharge on December 4, she was more alert and rational, and the optic disks were flat. The visual acuity was 20/20—4 O U, with persistent left homonymous hemianopia. There was very slight right facial weakness, a little weakness of the left arm, and some astereognosis in the left hand.



FIG 2 CASE 1 Lateral x-ray of skull, showing atrophy of posterior clinoid processes



FIG 3 CASE 1 Diagrammatic drawing of tumor *in situ* as seen at operation. The stippled lines indicate the area of cortex resected. Note that the ventricle is dilated throughout



FIG 4 CASE 1 Photomicrograph of tumor showing whorls of fibrous tissue.

During the past eighteen months she has had two petit mal attacks. At a recent routine check-up she appeared healthy and happy and had no complaints (Figs 5 and 6). Aside from



FIG 5 CASE 1 X-ray of skull taken approximately one year after operation. The large cluster of silver clips is upon the choroid plexus. Note the recalification of the posterior clinoid processes



FIG 6 CASE 1 Photograph of patient, one year and a half after her operation

the hemianopia, no neurologic defects were demonstrable. She has been doing her household work regularly, and the family state that her personality and mentality seem "natural."



## Comment

As in this instance, the predominant symptoms of tumors of the lateral ventricles are those of increased intracranial pressure. Headache, nausea, vomiting, vertigo, and papilledema are common. The neurologic manifestations have otherwise been inconstant, and save for the meningiomas of the superior tela referred to above, a definite clinical syndrome has not been established. In certain instances, hemiplegia and hemianesthesia and homonymous hemianopia have occurred. Convulsions of various types have been recorded. Loss of hearing for high tones was present in 4 of Dandy's patients (Cases 5, 6, 12, and 13). The symptoms, particularly headache, may be rather sharply intermittent in character. However, these features are almost equally characteristic of other tumors growing in the same neighborhood but outside the ventricles. Even if one suspects the presence of an intraventricular tumor, ventriculography is usually indicated unless the localization is perfectly obvious. The danger of a misplaced operative approach is tremendous, while that of a properly done air injection is relatively slight. When performed carefully and the air released as soon as the x-rays have been taken, and providing the operation is carried out without delay, the procedure involves very little risk.

## Technic

Once the exact position of the tumor is known, a moderate sized bone flap will usually suffice. After inspection and, if necessary, biopsy through a cortical incision, a small area of overlying brain is usually resected before enucleation of the tumor is attempted. Some authorities have advocated simple incision and retraction of the cortex rather than excision or "uncapping" the tumor. The latter method (incision and retraction), however, does not give as satisfactory an exposure, particularly if bleeding is encountered, nor does it entirely obviate injury to the adjacent brain. Firm, prolonged retraction of the incised surfaces of

the brain results in no little edema and petechial hemorrhage. In the case just reported, I do not believe that I could have controlled the bleeding had not the tumor previously been uncapped. Of course, if the growth lies in that part of the ventricle beneath the motor cortex, the approach must be made from in front or behind this region in order to minimize its injury. Needless to say, complete hemostasis is an absolute essential.

## Tumors of the Third Ventricle

Within this most inaccessible of the brain cavities, a number of circumscribed and curable tumors have been found. Prior to ventriculography, their demonstration had largely been at necropsy. By air injection Dandy has discovered a number of such tumors, the majority of which he has successfully removed, and other surgeons have reported similar experiences. If the tumor lies anteriorly, the ventricle may be approached via the frontal lobe and the foramen of Monro, if posteriorly, it may be approached by retracting the parietal lobe and then splitting the overlying splenium of the corpus callosum. Some surgeons prefer to resect the occipital lobe and make the attack through the medial wall of the ventricle.

If the pineal gland is excluded, the majority of benign growths apparently arise from the ependyma or the choroid plexus. A singularly interesting group of neoplasms, the "colloid cysts" occur only in the anterior portion of the ventricle. Although they are attached to the choroid plexus, their ultimate origin is not certainly known. Suffice it to say here, that they can be completely removed and will not recur.

Such tumors ultimately produce ventricular blockage with hydrocephalus and the usual evidences of increased intracranial pressure. Certain tumors grow very slowly and for many years produce only intermittent or "ball-valve" obstruction. Colloid cysts may behave in this manner. Sharply defined attacks of headache, nausea, vomiting, and other manifestations of increased pressure may

occur over a long period of years. In the intervals between attacks the patient may both look and feel perfectly well. Indeed, rather advanced dilatation of both lateral ventricles accompanied by mental deterioration has occasionally developed in the absence of choked disks.<sup>2</sup> As in the case of tumors within other ventricles, this intermittency is neither diagnostic nor uniform. Tumors outside the ventricular system may, for some time, also manifest themselves only upon isolated and irregular occasions.

No sharp-cut clinical syndrome exists. Either unilateral or bilateral motor and sensory symptoms may appear, extra-ocular palsies, papilledema, somnolence, and mental changes are common, but again neither constant nor diagnostic. Occasionally, ordinary x-rays disclose calcification within the tumor. On the other hand, the occurrence of ataxia, a positive Romberg, staggering gait, and nystagmus may strongly suggest a tumor in the posterior fossa. Without ventriculography, therefore, the surgeon might easily be led into a mistaken cerebellar exploration.

The following case illustrates some of the problems and vicissitudes involved in the surgery of the third ventricle.

### Case Report

*Case 2. Colloid cyst of the third ventricle—complete removal—recovery.*—L. R., a 28-year-old, white housewife was referred by Dr. Aird Boswell, of Troy, on September 29, 1938, complaining of increasingly severe headaches of three years' duration.

The pain had been predominantly bifrontal and suboccipital and was intensified by coughing or straining or by sudden change in posture, particularly by bending forward. For at least two years she had had, intermittently, a feeling of numbness in the right side of the face. Tinnitus in the left ear had occasionally been noted. In recent months the gait had become unsteady, and stooping had been accompanied by vertigo. During the same time vision had decreased until only headlines could be read, and her memory had become poor. She commented that during some of the bouts of headache, which often lasted many hours she had a feeling of hunger but could not eat because of the pain. During the previous year her weight had decreased from 159



FIG 7. CASE 2. Ventriculogram showing symmetrically dilated lateral ventricles but no air in the third ventricle.

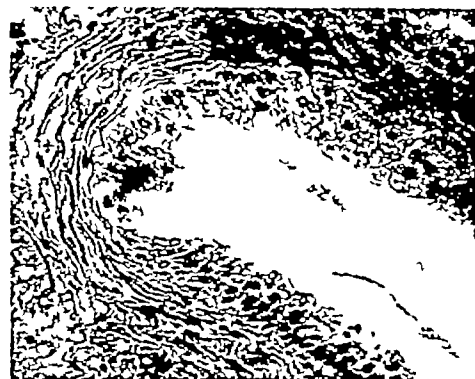


FIG 8. CASE 2. Photomicrograph of colloid cyst. For histologic study of this tumor, see "Goblet Cells in a Colloid Cyst of the Third Ventricle," Campbell, E. and Schwund, J. L. *Yale J. Biol. & Med.* 11: 501 (May) 1939.

to 136 pounds. More recently the attacks of facial numbness had largely shifted to the left side. Nausea and vomiting had accompanied the headaches for the previous week.

Family and past histories were not remarkable.

Physical examination disclosed a well nourished, white woman whose head, ears, nose, and throat showed no abnormalities. The general physical examination revealed nothing unusual.

The positive neurologic observations consisted of bilateral papilledema, a slight diminution of the right corneal reflex, and at times a positive



FIG 9 CASE 2 Photograph of patient at time of discharge from the hospital

**Romberg** The gait was somewhat unsteady, she walked upon a wide base and had a tendency to veer to the left. X-rays of the skull showed convolutional atrophy throughout the frontal and parietal region with thinning of the floor of the sella turcica and atrophy of the posterior clinoid processes. The sella was slightly enlarged. The usual laboratory examinations of the blood and urine disclosed no irregularities. The blood Wassermann examination was negative. The tumor was thought most likely to be cerebellar, but fortunately there was some doubt in our minds, and an air injection was decided upon.

When ventriculography was performed, the fluid was found to be under greatly increased pressure. Both lateral ventricles were tremendously dilated, but no air had entered the third ventricle (Fig 7). This was interpreted to mean that a tumor was present within the third ventricle anteriorly and had blocked both foramina of Monro, the lateral ventricles being in communication through an adventitious opening in the septum pellucidum.

Immediately after the ventriculogram, a right frontal craniotomy was performed under avertin-ether anesthesia. A window of the right frontal cortex was resected, opening into the lateral

ventricle. The slate blue wall of a third ventricle tumor was seen bulging into the foramen of Monro. The latter was then enlarged slightly anteriorly. The neoplasm proved to be a typical colloid cyst (Fig 8), filled with mucoid material and adherent to the choroid plexus in the anterior part of the third ventricle. Three distinct blood vessels were seen coursing from the plexus to the tumor. After these had been clipped and cut, the collapsed cyst came away freely.

Her convalescence was both prolonged and stormy. At a final exploration of the wound, a hemorrhage was found within the right frontal lobe and in the columns of the fornx. The right foramen of Monro was discovered to be sealed shut by adhesions. Since the septum pellucidum was widely open anteriorly, the left foramen of Monro could in addition be investigated and was also found to be closed. No intraforaminal clot was visible. When the foramina were reopened, clear fluid came up from the third ventricle. From that time on she made progress (Fig 9), and is now, some five months later, up and about. Her memory for recent events is poor, and she still tires easily.

### Tumors of the Fourth Ventricle

Tumors strictly confined to this ventricle are not common, whereas cerebellar gliomas, such as the medulloblastomas and astrocytomas, that bulge into it are frequently encountered.<sup>8</sup> Of the former group, ependymomas, blood vessel tumors,<sup>9</sup> and papillomas of the choroid plexus<sup>4,10</sup> are the more usual. Owing to their strategic situation, the outflow of cerebrospinal fluid is readily impeded, and thus pressure symptoms may occur while the tumor is still small. The neurologic symptoms are customarily those of most hindbrain new growths. Some observers have drawn attention to the sharp intermittency of symptoms that may characterize the early development of these tumors. Oppenheim, many years ago, pointed out the striking vertigo that sometimes accompanies change of position. Possibly in this group, ventriculography is less often required, for the evidence of increased pressure associated with neurologic signs relating to the cerebellum or medulla will lead to an exploration of the posterior fossa. As a matter of practice, however, unless the

signs of a tumor in this region are unequivocal, it is wise to inject air, for here, as elsewhere, a misdirected craniotomy would be catastrophic. In the following case, a hemangioblastoma was removed from the fourth ventricle and the patient has made a complete recovery.

### Case Report

**Case 3 Hemangioblastoma of the fourth ventricle**—H R., a 16-year-old white boy, was referred by Dr. Kalman Rosenblatt to the Albany Hospital on May 26, 1938 complaining of severe headache and of instability of gait of two weeks' duration.

He had been in good health until one year before admission, at which time frontal headaches began to appear approximately twice per month. Two weeks prior to admission, these pains had become more frequent and severe until they were practically constant and extended to the right temporal region. During the entire year he had vomited nearly every morning without preceding nausea. There had been no blurring of vision, no diplopia, no deafness, tinnitus, or vertigo, no motor weakness or convulsions or any sensory disturbance. There had been no polydysplasia or polyuria.

The family history was irrelevant. The past history was interesting in that two years before he had had morning nausea and vomiting for two months, for which an appendectomy had been performed.

Physical examination on admission disclosed a well-developed, well-nourished boy who was not acutely ill. The skull, ears, nose, mouth, and throat appeared to be normal. The general physical examination revealed no abnormalities.

On neurologic examination he was found to walk on a wide base, to hold his head to the right and to sway to the right side. The Romberg was positive. He was unable to stand on one foot alone, being particularly unsteady on the right. There was bilateral papilledema with hemorrhages. The pupils reacted to light, both directly and consensually. Both external recti were weak. There was slight right-sided facial weakness. The cranial nerves were otherwise normal. Some ataxia and dysmetria were observed in the right finger-to-nose test. There was no adiadochokinesis but the patient overpronated bilaterally. The deep reflexes were brisk and equal except for the ankle jerk, which was more active on the left. The abdominal and cremasteric responses were equally active.

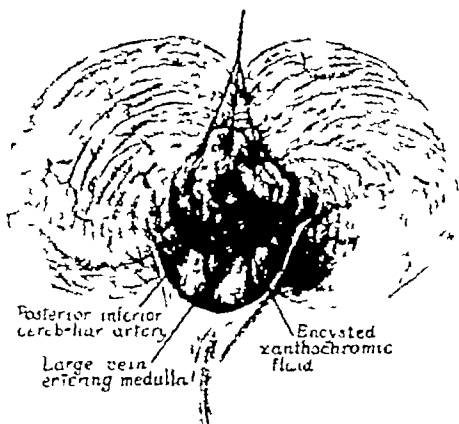


FIG 10 CASE 3 Drawing of angioma as seen at operation.

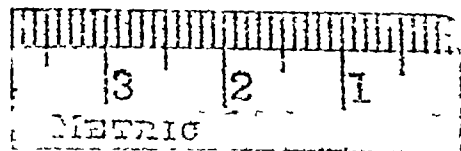


FIG 11 CASE 3 Photograph of tumor after removal. Observe the smooth wall and the silver clip on the large vein at the left lower corner.

**Laboratory Studies**—The hemoglobin was 100 per cent (Sahl) and the white blood count was 10,850 with a normal pattern. The urine contained a small amount of albumin on two occasions but was otherwise not unusual. The blood Wassermann and Kahn tests were negative. The blood N.P.N. was 40 mg per hundred cubic centimeters.

The patient was examined by Dr. LaSalle Archambault whose observations agreed with



FIG 12 CASE 3 Photomicrograph of angioma of fourth ventricle



FIG 13 CASE 3 Photograph of patient one month after operation

those recorded above and whose diagnosis was midline cerebellar tumor

On May 31, 1938, cerebellar exploration was carried out, a hemangioblastoma was found within the fourth ventricle and was totally removed

(Figs 10, 11, and 12) The postoperative course was relatively uneventful and the neurologic recovery has been complete. At the present time (Fig 13), one year after the operation he is in splendid condition, going to school and engaging in the usual athletic activities

Pathologic examination disclosed a soft, reddish, globular-shaped tumor weighing approximately 8 Gm. The capsule was smooth and glistening. The cut surface was for the most part finely granular and of a yellowish red hue. A number of smooth-lined spaces suggesting blood vessels were visible. The capsule was thin but well defined and appeared to be everywhere intact. Histologically, the tissue was typically a hemangioblastoma

### Summary

Attention has been called to a group of tumors arising and for the most part lying within the ventricles of the brain. Many are circumscribed lesions, lending themselves to surgery. While the diagnosis is customarily made on the basis of the history and the neurologic examination, precise localization usually requires ventriculography. An exact knowledge of the tumor's situation is particularly desirable in the instances of the third and lateral ventricles, since correctly placed deep incisions through the brain are required for exposure and enucleation. While this topographical classification of tumors includes several pathologic varieties, the surgical end results are on the whole quite good.

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A household that has one person ill enough to die from tuberculosis is fertile ground for future

cases—Oakes, Marian, *Amer. Jour. of Nursing* Dec., 1939

## MILK

### The Role of Medical Milk Commissions in Developing Standards for Milk Production

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THERE seems to be some misunderstanding as to what the terms used in grading milk actually mean. The designation Grade A milk implies that it is the best milk obtainable. Some people, including not a few doctors, believe that the only difference between Grade A and Certified is some special processing of the latter for infant feeding. I should like to touch upon these misconceptions in discussing some of the functions and achievements of the Medical Milk Commission, and compare Certified with Grade A and Grade B milk.

In no field has the progress in medicine been more marked during the past half century than in the prevention of disease in children. In 1888, so-called cholera infantum stood high in the list of diseases causing infant deaths. Dr. Henry L. Coit, of Newark, New Jersey, believed that one reason for this was impure milk. He consulted with Dr. T. Mitchell Prudden regarding the bacteriology of milk. The latter turned over that work to Dr. Rowland G. Freeman. He continued these studies for a number of years and devised the plate method of counting bacteria that is still the standard. Dr. Coit laid down sixty-three rules for securing a clean, pure, safe, and wholesome milk supply that physicians could use in infant feeding. To carry these ideas into effect, he finally, in 1893, organized a committee of physicians to act as an advisory body, which has since become known as the Medical Milk Commission of Essex County, New Jersey. A contract was made with a dairyman, Stephen Francisco. The milk produced by these rules was called "Certified Milk." The essence of this idea was that it is more logical and safer to attempt to produce pure milk and

keep it clean than to attempt to render dirty milk safe.

Loyalty and idealism played a part in the crusade. On the milk commission as secretary under Dr. Coit was the late Dr. Floy McEwen. He was so crippled by arthritis that he had his son and daughter make reports to him at the dairy while he, unable to get about, sat in his automobile. He was determined that Dr. Coit's measures should be carried out. He remained secretary for many years and refused to assume the chairmanship on Dr. Coit's death, though most of the executive direction of the commission was in his hands. Throughout all these years, the ideal and guiding principle of the milk commission has been to see that a pure, safe milk is provided for babies and invalids.

The Milk Commission of the Medical Society of the County of New York was the second such commission to be organized. This was in 1901. It is thirty-nine years old.

No account of the work of the New York County Milk Commission can be complete without some mention of the founders. Dr. Henry D. Chapin was the first chairman and was succeeded by Dr. Edward K. Dunham, who held this office until 1917. Dr. Rowland G. Freeman, who was secretary from the beginning, 1901, until he succeeded Dr. Dunham as chairman, still holds that position. Dr. Freeman has served the society in the milk commission for thirty-nine years. Dr. Walter Lester Carr followed Dr. Freeman as secretary and holds that office as well as taking an active interest in the Association of Milk Commissions. The late Dr. William H. Park also was one of the founders and continued active in the councils of the milk commission.

*Read at the Meeting of the Medical Society of the County of New York,  
March 25, 1940*

Other medical societies throughout the country formed medical milk commissions until they now number eighty-one. The local commissions were formed into the American Association of Medical Milk Commissions in 1907. While each organization formulated its own methods and standards, they showed a remarkable similarity in fundamental requirements. The object of the association was the extension of uniform methods and standards for the production of Certified Milk and to spread the movement throughout the United States. Four standing committees developed a scientific plan providing for medical examination of employees, chemical standard, and veterinary inspection and protection against tuberculosis. The plan was adopted by the association and in 1909 was published in the form of "A Manual of the Working Methods and Standards for the Use of the Medical Milk Commission." On these committees an illustrious group of physicians served for many years without pay.

The manual is revised from year to year to keep in accord with advancing scientific knowledge.

Certified Milk has attained leadership in the dairy industry. Even though the quantity produced is comparatively small, it is recognized very generally as the highest grade of milk obtainable. Many cities and states require by law that Certified Milk shall be produced according to the methods and standards of the Association Manual.<sup>1</sup> These regulations cover (1) supervision and reports, (2) purity and cleanliness, (3) pasteurization, (4) bacteriologic methods and standards, (5) physical and chemical methods and standards, (6) certified cream, (7) special certified milks, vitamin D, and soft curd. A Certified Milk producer may be suspended at any time by either the local commission or the council of the association. Reports of the work of local commissions to the association are submitted periodically, and any outbreak or epidemic of milk-borne diseases must be immediately reported. Special certified milks must meet the standards of Certified Milk. Vitamin D milk must have a

minimum potency of 430 U S P units per quart. Soft curd milk tested by the Hill or equivalent methods must have a curd tension below 30 Gm. Advertising is subject to the approval of the council.

In general, the standard of production and the supervision over Certified Milk is much more extensive and careful than that of any other milk. This includes not only more frequent and thorough tests of the cows and their milk but also extends to the important watch kept over the health of the dairy employees to guard against contamination of the milk with pathogenic bacteria.

Dr Freeman<sup>2</sup> makes the following comment on the New York Milk Commission:

"The plan devised by Dr. Coit was followed in New York by the employment of salaried experts to carry out the supervision of the dairies. These were an inspector, a physician, a veterinarian, a chemist, and a bacteriologist. The duty of the inspector was to visit the farms at regular intervals and supervise the sanitary condition of the farm. The physician was in charge of the health of the men handling the milk. It was his especial duty to see that no communicable disease was present among the help. He also visited the farm at regular intervals and in addition, it was the duty of the farmer to notify him immediately if any employee appeared sick. The veterinarian was in charge of the health of the cows. The chemist reported on the chemical analysis of the milk. The bacteriologist tested the milk for bacteria."

The commission was organized on that plan, but many modifications have taken place. The chief inspector is a veterinarian, a graduate of Cornell University, who has specialized in dairying. He visits the farms, examines the cows, the sanitary condition of the premises, and the reports of the local physician, and sends in a written report. A second inspector makes regular visits to the farms and reports on the chemical and bacteriologic examinations of all the milk that is certified and on the dairy conditions noted. A physician visits the farm weekly, more often when necessary on account of illness among em-

ployees or their families All cases of illness are immediately isolated All new employees must have a complete examination before going to work. This includes a careful history, a Widal test, cultures of feces for organisms of typhoid, paratyphoid, and dysentery, nose and throat cultures for the organisms of diphtheria, septic sore throat, and scarlet fever A positive finding in any one of these tests excludes the applicant (whether carrier or suffering from the disease) from employment. The feces examination is repeated in one or two months If accepted, the applicant is vaccinated unless there is evidence of a recent successful vaccination. These examinations are repeated annually The families of employees are also under the care of the physician All laboratory tests are made in laboratories approved by the commission

The veterinarian in direct charge is usually one living in the neighborhood of the farm He is in charge of the health of the cows Before a farm is accepted for certification, he must exclude as far as possible all disease from the herd, especially tuberculosis, contagious abortion, and mastitis Each animal of the herd is given a tuberculin test, and if either a positive or a suspicious reaction is obtained, the animal is removed from the herd All additions to the herd are tested before admission unless obtained from a fully accredited herd Tuberculin tests are repeated every six months Reactors are immediately removed and their stalls disinfected For contagious abortion a blood test is used, and reactors are immediately removed from the herd Reactors to either the tuberculin or abortus tests are becoming exceedingly rare. In 10,779 tuberculin tests there were 29 reactors In 13 reactors, no tuberculous lesion could be found at autopsy In 33,838 tests for abortus only 253 reactors were found, one for each 350 cows tested (0.28 per cent) While no figures are available for milk not certified, it is estimated that 15 to 20 per cent of cows are infected with contagious abortion

Mastitis is detected by observation of the character of the milk and by bac-

teriologic examination Cows showing any abnormality of any quarter of the udder are removed from the herd They are not readmitted until proved free from disease

The milk commission, appointed by the president of the Medical Society of the County of New York, is composed of physicians interested in pure, safe milk, including experts in bacteriology and vitamin investigation, all serving, of course, without pay and with no pecuniary interest in the dairy farms

An important result of all this widespread interest and study has been the stimulation of a demand for cleaner milk, and, as a result, in these last four decades the mortality from diarrheal diseases among infants has decreased to such an extent that one now rarely sees such cases in private practice and not many in the infant wards Infant mortality due to diarrheal diseases has been reduced from a rate of 45 per 1,000 in 1900 to 3.1 in 1939 In 1900, 20 per cent of infant mortality was due to diarrhea.

Sherman, McCollom, *et al*, maintain that milk should be the basis of diet at all ages Since milk is one of the most important foods for children, it is essential that it be reasonable in price and safe Credit should be given dairymen and farmers whose loyal cooperation has made possible this great progress—supplying clean, wholesome milk at moderate cost.

The expensive modern buildings and equipment are of no avail without conscientious and unremitting attention to every detail The farmer must observe the scientific and scrupulous care of the laboratory worker One grain of stable dirt has been found to contain 32,840,000 bacteria. Certified Milk must not show a count of more than 10,000 bacteria per cubic centimeter It usually shows much less

Milk is not constant in food value. The fat percentage is dependent on the breed but may be increased by the ration fed the cows The mineral constituents, protein, and milk sugars increase in proportion so that the total caloric value can be raised from 620 to 670 per quart. The vitamin



content of milk is subject to variations also Vitamins A, B, G, C, and D are present in cow's milk A and C vitamins are increased about 50 per cent in milk from pasture-fed cows as compared to average fed cows The amount of carotene in the feed of the cow influences the amount of color, carotene, hence the total amount of vitamin A in the milk A scientifically balanced ration fed to the cows maintains Certified Milk at about the optimum nutritive level both winter and summer Vitamin A is especially high

Vitamin D in ordinary milk is low Certified Milk with vitamin D increased by feeding the cow six to seven ounces daily of irradiated yeast is under supervision and is regularly analyzed in the laboratory employed by the milk commission

It is evident that specially constructed buildings and equipment, selected highest cows, special food, expert supervision and care, all add to the cost of producing and marketing milk For this reason, it is necessary to charge about 3 cents more per quart than for Grade A The cost of certification is defrayed by the farms, based on the amount of milk sold as certified Fees are paid to the county medical society This is a voluntary arrangement, made between the farmers and the milk commission

There are only eleven farms supplying Certified Milk to New York City, hence exacting supervision is not a difficult problem About 60,000 farms contribute to the metropolitan supply of Grades A and B milk Great strides have been made in safeguarding this enormous quantity of milk by the producers under the supervision of federal, state, and city agencies It would seem obvious that the standards and methods for producing this milk cannot be enforced so well as the higher standards for Certified Milk While the milk commission is only concerned with the standards maintained for Certified Milk, yet a comparison with the standards set up by the New York City Health Department for Grade A and Grade B milk might be interesting

Milk inspection in New York City began in 1873 Pasteurized milk has been sold since 1893, when Nathan Straus established the first of his famous milk stations The first grading of milk was under the administration of Commissioner of Health, Ernst J Lederle, and it was then divided into four classes, Certified, Grades A, B, and C In 1914 the pasteurization of all milk except Certified Milk was ordered by the commissioner of health Three grades of milk only were sanctioned by the Sanitary Code (New York City Health Department) in 1938 as Certified Milk, Grade A, and Grade B

Bacterial counts of milk are an indication of its sanitary quality, though high counts do not necessarily indicate dangerous or pathogenic bacteria In 1901, New York milk was found by Park to contain 6,000,000 bacteria per cubic centimeter In 1906 Washington milk was found by Rosenau to contain 23,000,000 bacteria per cubic centimeter In 1895, milk in St Petersburg, Russia, showed 115,300,000 per cubic centimeter Under present sanitary conditions, the bacterial counts are far better in all grades of milk than the maximum allowed

In recent reports of 260 specimens of Certified Milk, 152 had counts under 1,000 Only 59 had more than 2,000 and only 9 more than 5,000 bacteria per cubic centimeter Certified Milk may be pasteurized Unless otherwise indicated, it contains approximately 4 per cent butter fat (average 4.2 per cent) It must be delivered to the customer within thirty hours of milking and must be kept at a low temperature—under 50 F This low temperature inhibits the growth of bacteria in milk Certified Milk is usually sold raw No other milk is permitted to be sold raw

Grade A\* milk must be pasteurized It must contain 3 per cent butter fat and must be delivered to the customer within thirty-six hours after pasteurization—about forty-eight hours to sixty hours after milking The milk must be cooled to a temperature not more than 50 F

\* Premiums paid for Grade A milk are on the basis of low counts

TABLE 1—BACTERIAL COUNTS OF DIFFERENT GRADES OF RAW AND PASTEURIZED MILK

Bacteria per Cubic Centimeter	Limits Legal				Averages in Actual Counts		Number of Specimens	
	In country Raw	Past.	In city Raw	Past.	Raw	Past.	Raw	Past.
Certified	10 000	500 <sup>a</sup>			4 183 <sup>c</sup>	42 <sup>c</sup>	1 511	114
Grade A	100 000	30 000 <sup>b</sup>	200 000	30 000	59 600 <sup>d</sup>	815 <sup>d</sup>	1 010	300
Grade B	300 000	50 000	750 000	50 000	264 325 <sup>d</sup>	7376 <sup>d</sup>	1,246	320

<sup>a</sup> Pasteurization all done in country<sup>b</sup> Pasteurization mostly done in city<sup>c</sup> All counts April 1, 1939 to April 1, 1940 by Milk Commission Laboratory<sup>d</sup> Counts (spotted through supply) three summer months three winter months 1937-1938 by special committee.<sup>1</sup>

immediately after milking Grade B must be cooled to 60 F, must be pasteurized, must contain 3 per cent butter fat, and must be delivered within fifty-four hours after pasteurization

The percentage of fat in Grade A milk was from  $\frac{1}{2}$  to 1 per cent higher than Grade B milk. Dr W H Park<sup>2</sup> concludes in comparing Grade A and Grade B milk that Grade A milk came from herds more carefully tested and supervised, produced in more sanitary barns with superior methods and equipment, and delivered earlier, and that the knowledge of the majority of the farmers producing Grade A milk regarding the importance of scientific cleanliness was above that of the majority of the producers of Grade B milk.

Because lactic acid bacteria are destroyed by pasteurization this process prevents souring of milk. Bacteria, good and bad, develop very rapidly in milk, a good culture medium, when milk stands at room temperature. Pasteurization destroys an excellent index of staleness and bacterial multiplication. For this reason, raw milk possesses a natural indicator of freshness, available in Certified Milk. Sour Certified Milk is practically never found in its daily use provided the milk has been kept properly refrigerated. Milk should be kept cold from dairy to consumer to safeguard against spoiling. Raw Certified Milk can safely be kept in the ordinary house refrigerator for five or six days and still be quite palatable. In my experience, Grade A and Grade B milk are not palatable after forty-eight hours.

### Summary

Certified Milk stands highest of all milks in vitamin and nutritional values and is cleanest, purest, freshest, and most

palatable. It keeps best and is the only milk with production standards sufficiently high so it is considered officially safe to drink raw. With such standing, physicians can recommend it with the confidence that Certified Milk not only will be beneficial but will be enjoyed by those drinking it.

The milk commissions throughout the country have indirectly been instrumental in raising the standards of milk production. This has been brought about by demonstrating

1 That certain diseases, not only of infants but of adults, may be milk-borne—as a rule through contamination

2 That milk can be produced in such a manner as to eliminate this danger

3 That Certified Milk is an achievement which undoubtedly saved the lives of many infants who might have died as a result of being fed infected milk before present standards were developed

4 That dairymen will cooperate fully in an arrangement such as that existing between milk commissions and milk producers

5 That the public is willing to pay more for the highest standard in milk production

6 Finally, that voluntary and unpaid groups of doctors with an ideal have guided this work for the past half century. They have succeeded in establishing standards of milk production where practically none existed before. This has been done without compulsion, legal enactments, or resort to the courts.

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# TOXIC MANIFESTATIONS OF SULFAPYRIDINE

SIDNEY KATZ, M D , Newark, New Jersey

*(From the Department of Pathology and the Laboratories of the Newark City Hospital)*

WITH the introduction of sulfanilamide into the science of chemotherapy and its wide clinical success, a host of related benzene compounds were tried to determine their effectiveness against certain infections. Since Whitby<sup>1</sup> first demonstrated that sulfapyridine (2 - *para* - aminobenzenesulfonamido-pyridine) had a specific action against the pneumococcus and Evans and Gaisford<sup>2</sup> reported its value in the treatment of lobar pneumonia in human beings, this drug has found wide usage. In a brief period, the entire outlook in the treatment of pneumonia has been changed.

The primary consideration in the evaluation of any new drug is its toxicity when used clinically. Wien<sup>3</sup> soon showed by studies in the lower animals that this new drug had toxic potentialities. However, his conclusions that the drug was about one-fourth as toxic as sulfanilamide and, unlike sulfanilamide, did not cause reduction in the number of leukocytes or erythrocytes in the circulating blood have since been refuted by Long,<sup>4</sup> who maintains that the toxic manifestations of sulfapyridine therapy are essentially those witnessed in the usage of sulfanilamide, with the possible exception of acidosis, which has not yet been reported. Lloyd, Erskine, and Johnson<sup>5</sup> believe that, clinically, the toxic results are comparable to those of sulfanilamide given in equal amounts but that lower doses of sulfapyridine are effective. Occasional cases of granulocytopenia, hemolytic anemia, azotemia, and hematuria have been encountered. It is agreed, however, that the toxic reactions that appear in the course of treatment with sulfapyridine seem to occur on the basis of a peculiar idiosyncrasy.

With serious toxic effects unpredict-

able in their occurrence, a special study was made of the toxic manifestations of sulfapyridine in 100 consecutive patients treated with this drug. All symptoms and signs referable to toxicity were carefully recorded. It was soon noted that approximately one-half of the adults and one-fifth of the children showed some toxic side reactions.

## Gastric Irritability

Clinically, the most commonly encountered symptom was nausea and vomiting (about 25 per cent of the patients). These manifestations of gastric irritability appeared most frequently within the first twenty-four hours of treatment. In 15 cases the vomiting was so severe that it was necessary to stop treatment altogether. In 10 cases the nausea and vomiting was such a source of distress to the patients that they refused to take the drug in its original form. None of these patients died, however.

There appeared to be no particular correlation between the occurrence of gastric distress and the amount of sulfapyridine administered. In one instance it was found necessary to discontinue the treatment after only 5 Gm of the drug, whereas over 95 Gm was administered to 1 patient with a type VII pneumococcic pneumonia complicated by a meningitis without any toxic reaction. Whitby was of the belief that these untoward reactions were probably caused by direct action on the mucosa of the stomach. However, Marshall and Long<sup>6</sup> observed that nausea and vomiting still occurred when the drug was administered intravenously in the soluble sodium form, giving us reason to believe that these side reactions were of central origin.

Various means were suggested to overcome these troublesome symptoms. At

Acknowledgment is made to Dr Harrison S. Martland for his assistance in this study.  
The sulfapyridine used was Dagenan.

first, the low solubility of the drug might have precluded the possibility of adequate parenteral administration. However, we have resorted to various measures such as giving small amounts of sodium bicarbonate after sulfapyridine, mixing the drug in powdered form with water, fruit juices, or milk, omitting one or two of the "divided" doses, administering sodium phenobarbital and chloral hydrate, or, finally, giving sodium chloride and dextrose intravenously to minimize the nausea and vomiting and at the same time restore the normal fluid and electrolytic balance. In several cases the drug was given in powdered form dissolved in milk per rectum. We have had varied success with each of these procedures. Whitehead and Carter<sup>7</sup> relieved gastric distress by putting the patients under oxygen tents a half hour before sulfapyridine was administered and keeping them there for the same length of time after the medication. McGinty, Lewis, and Holtzclaw<sup>8</sup> reported the use of nicotinic acid to ameliorate the unpleasant symptoms that so frequently accompany sulfamidamide therapy. We have used nicotinic acid as an adjunct to the administration of sulfapyridine instead of bicarbonate of soda, with some success.

### Cerebral Complications

Disturbances of the central nervous system have often been reported as symptoms of sulfapyridine toxicity. Such reactions were observed in 7 per cent of the cases in this series. These varied from mild personality changes such as light-headedness, irritability, depression, confusion, and lethargy to the more serious toxic psychoses of such severity as to render the patients irrational, disoriented, and some so maniacal as to justify full restraints. These mental disturbances usually appeared after comparatively small doses of the drug. A history of chronic alcoholism was obtained in four of these patients. In several of the patients it was difficult to determine whether the sulfapyridine or the underlying disease was responsible for the delirium. Thus

was especially troublesome in the treatment of cases of lobar pneumonia. It was our observation that mental disturbances appeared more frequently with sulfapyridine than with serum therapy. In the treatment of the pneumonias, the children appeared to tolerate the combination of hyperpyrexia and sulfapyridine better than the older patients under study.

### Hematuria

The appearance of hematuria as a serious toxic manifestation in the administration of sulfapyridine has been observed in man as well as in the lower animals. Antopol and Robinson,<sup>9</sup> in the course of an investigation of the pharmacology of sulfapyridine in laboratory animals, observed the formation of uroliths in the urinary tracts of rats, monkeys, and rabbits. Gross, Cooper, and Lewis<sup>10</sup> and Toomey<sup>11</sup> have reported similar findings in animals. Lawrence<sup>12</sup> noted a human case of right lower quadrant pain and hematuria due to stone formation after sulfapyridine therapy. Southworth and Cooke<sup>13</sup> reported 3 cases of hematuria, 1 with visible blood and 2 also associated with severe abdominal pain of ureterorenal origin and nitrogen retention due to renal insufficiency. We have observed hematuria without abdominal pain or azotemia in 4 per cent of the patients treated with sulfapyridine. In 1 case, moreover, the urine was visibly bloody, and we were fortunate enough to have the opportunity to study the innumerable crystals of acetylsulfapyridine which appeared in several specimens.

The following case illustrates the development of hematuria as a symptom of toxicity in treatment with sulfapyridine.

### Case Report

*Case 1*—H. T., a white American housewife, aged 26, was admitted to the Newark City Hospital on May 19, 1939, because of the sudden onset of chills, pleural pain, and cough with the production of a rusty sputum five days previously. She gave no significant family history. Physical examination revealed an acutely ill, pregnant female with signs of lobar consolidation and pleural effusion below it. The abdomen was

enlarged to the size of a five-month gestation. The temperature on admission was 101.6 F, the pulse rate 110 per minute, and the respirations 24 per minute. X-ray examination confirmed the presence of a resolving lobar consolidation of the right lower lobe with a moderate amount of fluid at the right base. A type XIX pneumococcal organism was isolated by the mouse inoculation technic. A blood culture failed to reveal the presence of any organisms. Urinalysis performed on admission showed a specific gravity of 1.015, albumin of 1 plus, an acid reaction to litmus, and an occasional pus cell, but no red blood cells per high power field. There was no previous history of genitourinary disease. A blood pressure reading obtained soon after admission was 128 mm systolic and 74 mm diastolic.

After a few days failure to improve with ordinary supportive therapy, the patient was started on sulfapyridine. Thirty gr were given orally for the first dose, and subsequently 15 gr every four hours. On the third day of such therapy, the patient complained of loss of appetite and nausea and proceeded to have several emeses. On the following day, after a total of 22 Gm of the drug had been administered, her urine was observed to be grossly bloody. The drug was stopped immediately and intravenous fluids were administered. The free sulfapyridine in the blood at that time was 4.23 mg per hundred cubic centimeters, and the urine contained 51.46 mg per hundred cubic centimeters.

The patient presented no complaints of pain. A vaginal examination revealed no evidence of pelvic pathology or bleeding. Several catheterized specimens were obtained and examinations of these revealed a trace of albumin and innumerable red blood cells. No casts were discerned, but numerous crystals were present in each field. These crystals appeared as colorless thin rhomboid plates with sharp edges, usually single but tending to adhere together and overlapping each other in occasional shingle-like formation. They were identified as acetylsulfapyridine crystals similar to those described as forming concretions in the urinary tracts of animals. There was no elevation in temperature. Cystoscopic examinations, intravenous pyelograms, and flat plates of the abdomen revealed a mild bilateral hydronephrosis but no evidence of any calculi. The blood nonprotein nitrogen proved to be 13 mg per hundred cubic centimeters. The urinary output was essentially normal. After five days of forced intravenous therapy the urine was gradually cleared of red blood cells.

Soon thereafter, the right side of the chest was tapped and a seropurulent fluid was with-

drawn from which a pure culture of *Staphylococcus aureus* was obtained. However, repeated tapings and irrigations with antiseptics failed to produce any improvement, and on June 15, a thoracotomy with rib resection and drainage of the empyema cavity was performed. The patient thereupon improved gradually until her release on July 7, 1939.

The mechanism of the production of hematuria is associated with the formation of concretions of acetylsulfapyridine in the urinary tract. Stewart, Rourke, and Allen<sup>14</sup> showed that sulfanilamide was recoverable up to 97 per cent in the urine, making the kidney the sole exit of the drug from the body. They also demonstrated that the excreted sulfanilamide could precipitate in the urine at room temperature and might form stones in the urinary tract. Antopol and Robinson and others have demonstrated the presence of concentrations in the urinary tracts of laboratory animals that had been fed sulfapyridine and also showed that these uroliths were made up of crystals of acetylsulfapyridine. Southworth and Cooke discovered crystals in the urinary sediment in 1 of the 3 cases of hematuria described by them. We were able to demonstrate that the crystals found in the urine of the case reported would precipitate at room temperature. The irritation of the mucosa of the urinary tract by those sharply spiculated acetylsulfapyridine plates presumably caused hematuria without producing abdominal pain or obstruction to the flow of urine.

The factor of stasis in the urinary tract also appears to be an important element in the formation of urinary concretions. Toomey reported that he was able, by the feeding of sulfapyridine, to produce uroliths in *Macacus rhesus* monkeys whose bladders had previously been paralyzed. In the case that we studied, stasis of urine in the upper ureter and kidney pelvis, as shown by the appearance of a mild bilateral hydronephrosis that seems to be physiologic in pregnancy, was undoubtedly an important factor in the production of the concretions that precipitated the gross hematuria.

It is possible that a large number of patients treated with sulfapyridine would develop hematuria with the same frequency as laboratory animals do were it not for the fact that the ureteropelvic tracts of humans are considerably larger than those of animals and consequently make it possible for the crystals of acetylsulfapyridine to be washed out before having had the opportunity to precipitate. The treatment, therefore, of hematuria associated with the use of sulfapyridine demands the immediate discontinuation of the drug and the administration of large quantities of fluids.

### Cutaneous Lesions

Dermatitis medicamentosa, a simple maculopapular rash, has been reported as appearing in about 6 per cent of patients receiving sulfanilamide. Flippin<sup>15</sup> in a series of 100 cases reported 1 case of cutaneous eruption following sulfapyridine therapy. We observed 2 patients who developed cutaneous lesions during the course of treatment with sulfapyridine. The cutaneous eruptions were morbilliform in type, apparently similar in all cases, resembling a confluent measles at times and involving any part or the entire body. The rashes usually appeared during the first few days of treatment and disappeared within forty-eight hours after the drug had been discontinued. In each instance the medication was stopped immediately after the rash appeared for fear of the progression of the eruption into an exfoliative dermatitis.

Hallam<sup>16</sup> reported a case of sensitization of the skin to the effects of actinic light by use of sulfapyridine, the patient suffering extensive second-degree burns when given a single exposure to ultraviolet light after having been given treatment with M & B 693 (sulfapyridine) previous to the exposure. It seems that these cutaneous eruptions, like many other symptoms of sulfapyridine toxicity are not the results of overdosage of the drug or high blood concentrations but appear on the basis of some peculiar, as yet not understood, idiosyncrasy.

### Cyanosis

The appearance of cyanosis in patients receiving sulfanilamide has been a fairly common occurrence. Reports have estimated it as occurring in from 50 to 90 per cent of the cases in which the drug was used. Cyanosis has been attributed to one of three substances in the blood: methemoglobin, sulfhemoglobin, or some as yet unrecognized pigment in the blood. Evans and Gaisford<sup>2</sup> found, in treating pneumonia with sulfapyridine, that cyanosis occurred in 25 per cent of their patients.

Others have reported rather severe cyanosis in about 10 per cent of patients treated with sulfapyridine. More recent reports have indicated that cyanosis has not been encountered with such frequency and, when present, has not been marked. We have observed cyanosis in only 1 per cent of our cases. This discrepancy appears to be due to the difficulty in estimating whether the cyanosis is attributable to the drug or is associated with the pneumonia, the problem being even more acute because of the almost exclusive use of sulfapyridine to treat the pneumonias.

### Anemia and Granulocytopenia

Anemia, both acute and chronic, and agranulocytosis have been produced by the administration of sulfanilamide. Both of these serious complications have also been observed when sulfapyridine has been used. Dr. Colin McLeod of the Hospital of the Rockefeller Institute has observed 2 cases of acute hemolytic anemia in which sulfapyridine was being administered at the time these blood disorders appeared. Johnston,<sup>17</sup> Flippin,<sup>15</sup> and Long<sup>4</sup> have reported the occurrence of agranulocytosis in addition. Rosenthal and Vogel<sup>18</sup> recently observed 3 cases of granulocytopenia in children who had been treated with sulfapyridine.

We have not as yet observed any gross blood dyscrasias in our cases. However, in the majority of cases the white blood count tended to fall during the first thirty- to forty-eight hours coincident

TABLE 1—SUMMARY OF 100 CASES TREATED WITH SULFAPYRIDINE

Condition	Number
Lobar pneumonia	61
Bronchopneumonia	29
Pulmonary tuberculosis	4
Acute mastoiditis	2
Streptococcal pneumonia	2
Rheumatoid arthritis	1
Pneumococcal meningitis	1
Total	100

with the usual drop in temperature encountered in the treatment of infectious diseases

The red blood count and hemoglobin slowly fell in a number of cases but in no one instance sufficient to cause any alarm or discontinuance of the drug. The dangers, however, of an acute hemolytic anemia or a granulocytopenia remain and make it necessary for careful and frequent studies of the blood of every patient treated with sulfapyridine.

### Other Toxic Manifestations

Jaundice, diarrhea, lethargy, and abdominal pain have been observed in 3 per cent of the cases. Fever due to the drug has been reported by several observers. Abrupt and violent febrile responses did not appear in any of the patients studied. It is a difficult problem, however, to recognize drug fevers in patients suffering from such a febrile disease as pneumonia.

Vertigo, headache, tingling of the extremities, and dyspnea have been encountered by several investigators. Acidosis, however, a common toxic reaction in the course of sulfanilamide therapy, has not as yet been reported in the literature for sulfapyridine.

### Summary

1 This report was based on the results of a study of the signs and symptoms of toxicity encountered in the course of treating 100 cases of pneumonia and other infections with sulfapyridine.

2 Nausea and vomiting, appearing in 25 per cent of the patients treated, were the most commonly encountered toxic manifestations. There appeared

TABLE 2—TOXIC REACTIONS IN THE 100 CASES

Reaction	Number of Cases	Average Total Amount of Drug Administered Before Reaction, in Grams	Average Blood Concentration During Reaction, in Mg per 100 Cc.
Nausea	25	10.9	4.98
Vomiting	23		
Mild	8	11.9	4.21
Severe	15	10.1	4.92
Psychic disturbances	7	13.3	4.63
Hematuria	4	13.6	4.69
Dermatitis	2	19.4	4.42
Jaundice	1	15.0	2.42
Cyanosis	1	11.0	5.16
Abdominal pain	1	22.1	3.61
Anorexia	1	5.1	3.02

to be no apparent correlation between the development of gastric irritability and the amount of the drug administered.

3 Disturbances of the central nervous system were noted in 7 per cent of the patients and varied from mild personality changes to the more serious psychoses.

4 Four cases of hematuria appeared to complicate the use of sulfapyridine. This serious toxic disturbance is apparently caused by the irritating effect of the sharp acetylsulfapyridine crystals that precipitate in the urine. A case is reported illustrating this toxic manifestation. Stasis appears to be an important predisposing factor in the production of hematuria with sulfapyridine.

5 Dermatitis and jaundice were the other serious symptoms of toxicity noted.

6 Milder symptoms such as diarrhea, lethargy, abdominal pain, cyanosis, and dyspnea were also encountered.

7 Drug fever, vertigo, headache, tingling of the extremities, acute hemolytic anemia, and granulocytopenia have been reported in the literature but were not observed in our series.

8 With this recognition of the nature of the toxic manifestations of sulfapyridine, constant observation of each patient under treatment will allow earlier detection of the symptoms of toxicity while they are still amenable to appropriate countermeasures and will permit this valuable drug to be used with a satisfactory margin of safety.

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## FOR A "SECRETARY OF HEALTH" IN THE CABINET

The establishment of a federal department of health to be headed by a scientifically trained health expert, rather than a politician, with the rank of a Cabinet member, was urged by Dr Nathan B Van Etten, president-elect of the American Medical Association, in an address on "An American Health Program" before the Society of Medical Jurisprudence at the New York Academy of Medicine, 2 East 103rd Street, on March 11.

Dr Van Etten approved President Roosevelt's proposal for the construction of fifty 100-bed hospitals in localities throughout the country where hospital facilities are lacking.

Dr Van Etten described as "probably the most serious problem facing the country today" the alarming number of insane patients in the nation's hospitals.

"Forty-seven per cent of all the patients in our hospitals today," said Dr Van Etten, are there because of insanity. Venereal disease is largely a contributory cause of this. It is one of the most serious problems confronting our people. To deal with this matter may require a change of scientific attitude, with stress laid on preventive medical study instead of the present curative character of medicine. Eugenics may play an important part, and several generations of careful mating may exert a strong influence in cleaning our institutions of their feeble-minded."

Dr Van Etten declared that "the speed of our modern life is destroying the stability of our

young people." They stay out at parties too late," he said. "They don't get enough sleep. They get tired out with their social exercises. The night life is a serious problem. Effective remedies might involve a reorganization of society."

"If local health departments have proved their value," Dr Van Etten added, "if state health departments have become indispensable, why has a national health department been so long postponed? Coordination of all federal health agencies, except those of the Army and Navy, seems a logical thing to do. The health of our people should be the honest concern of our Chief Executive, and the health authority should be a member of his Cabinet."

"I would like to see a new national department, to be known as the Department of Health, headed by a secretary who must have had a medical education and be licensed to practice medicine. I would like this department to include the following bureaus: public health in fancy, and maternal welfare transferred from the Labor Department, rehabilitation of veterans, research, licensure, care of indigents, and other divisions to care for all other health responsibilities, fusing all departments into one less expensive to operate and eliminating the confusion of overlapping and duplication. I believe the President should have the benefit of scientific advice in health and hygiene within his official family. Defense against disease is quite as important as defense against the ideas and domination of foreign enemies."

## DOCTORS WERE NOT FOR SALE

Word comes from New Zealand, as quoted in the *Illinois Medical Journal*, that practically all of the thousand physicians there have refused to accept a \$7 500 yearly income guaranteed by the New Zealand government on the understanding that these physicians will become cogs in a socialized medicine system. This sum, it appears, is more than the average New Zealand physician has ever earned or ever expects to.

This news from another part of the world may help to change an apparent conviction on the part of a good many Americans that the opposition by our doctors to compulsory sickness in-

surance and other medical affairs in this country is based on an entirely mercenary condition.

As a matter of fact, doctors are the same the world over. Whether in America or in New Zealand they spend hours away from their paying practice, giving their services to the poor, they oppose socialized medicine as something that would hurt patients the public, and themselves. Heretofore they have only been privileged to shrug when their motives were challenged. Now, by the action of these New Zealand physicians, the profession has been put to the test.



# Medical News

## County News

### Albany County

The Albany County Medical Society heard a lecture on March 27 in the auditorium of Albany Pharmacy College by Dr Samuel R Meaker, professor of gynecology, Boston University School of Medicine

Dr Meaker discussed discoveries made during two decades of research into the diagnosis and treatment of human sterility

Dr Philip L Forster, president of the society, was chairman and Dr Lyle A Sutton, of Albany, formerly of Prattsville, Greene County, led the discussion

The June meeting will be devoted to scientific addresses by members of the society

### Bronx County

The Bronx County Medical Society met at Burnside Manor on March 20 and listened to this program on Recent Advances in our Knowledge of Filtrable Virus Diseases (a) Experimental Observations, (b) Clinical Considerations, by Dr Thomas Francis, Jr, (c) Therapeutic Measures, (d) Discussion, by Dr Ralph S Muckenfuss

A series of obstetric conferences, being held in the auditorium of Fordham Hospital on the third Thursday of each month at 4 P.M., are being conducted by the Maternal Welfare Committee of the Bronx Obstetrical and Gynecological Society as part of the program of the Public Health Committee of the Bronx County Medical Society

At these conferences, maternal deaths occurring in Bronx County are fully discussed from the point of view of prenatal care, conduct of labor, complicating factors and cause or causes of death. Errors of omission and commission in their relationship to errors in judgment and technique are discussed in their application to the particular case.

On Saturday, May 4, Morrisania Hospital staff will hold a dinner in honor of its five outstanding members, Dr Nathan B Van Etten, president-elect of the American Medical Association, Dr Terry M Townsend, president of the New York State Medical Society, Dr George E Milani, president of the Bronx County Medical Society, Dr William L Bollens, president of the Bronx County Dental Society, and Dr Harry Aranow, member of Council, New York State Medical Society

The Bronx Otolaryngological and Obstetrical Society met on March 26 in the Concourse Plaza Hotel at 9 00 P.M. The program was Atypical Mastoiditis, Extradural Abscess—Report of a Case, by Dr Isidore Berger, and discussion by Dr Ira S Witchell

The Bronx Gynecological and Obstetrical Society met at the Concourse Plaza Hotel on March 25, and heard a paper on "Urethral and Vesical Fistulas" by Dr Henry Dawson Furness.

The North Bronx Medical Society met on April 4, at Elmsmere Hall, and heard this program

(A) Case Presentation—New Method of Dreyfus Le Foyer Two Stage Lobectomy, with Case Report, by Dr A N Gorelik (B) Papers—(1) Newer Aspects of Allergy Diagnosis and Treatment, by Dr Will C Spain with discussion by Dr Charles A Spiwak and Dr A A Goodman, (2) Diagnosis and Management of Eczematous and Atopic Dermatoses in General Practice, by Dr Marion B Sulzberger, with discussion by Dr Samuel Feldman and Dr A Rosenberg, Sr (C) General Discussion

### Broome County

The Broome County Medical Society listened to a paper on 'Hypertension, its Clinical Significance and Treatment,' by Henry M Thomas, Jr, at a joint meeting at the Wilson Memorial Hospital on March 19

### Chautauqua County

Dr Paul W Beaven, of Rochester, specialist in children's diseases, was the speaker at the meeting of the Chautauqua County Medical Society on March 20 at White Inn, Fredonia. His subject was "Abdominal Pains in Children." A general discussion followed. About forty members and guests attended, with Dr Harry E Wheelock, president, presiding

### Chenango County

The Chenango County Medical Society has appointed a committee to call on the board of supervisors at the next meeting to present again the request of the physicians for mileage fees in making certain indigent calls. The present fee is \$2.00, which the physicians agree is reasonable in local cases, but they feel that mileage fees should be paid, in addition, for calls that require long distance travel, sometimes 10, 15, or even 25 miles. They ask for 25 cents a mile one way. This fee was granted by the supervisors in December but the vote was rescinded when Commissioner Woodruff reported that the approved budget provided no funds for the payment

### Delaware County

Complete revision of fee schedules for all relief work done by county physicians is under consideration following a meeting of the Delaware County Medical Society in Walton, on March 19

Pointing out the difficulty in the matter of ascertaining proper fees for relief work, Dr Thomas C Monaco, of Walton, society president, said that tentative recommendations would be presented to the committee on medical economy for discussion. When approved by the society plans will be presented to the county welfare officers association and the final analysis will be relayed to the county board of supervisors

Sometime this spring or summer, it is reported, the Delaware County Medical Society will participate in a reception in honor of Dr Robert Brittain, of Downsville, to mark his fifty years as practitioner in the Downsville area

Dr Brittain's grandfather, it is understood, was the first doctor to be licensed by the Delaware County Medical Society, the county societies at that time doing the licensing.

The occasion, it is said, will be somewhat like the gathering which honored Dr Leonard Wakeman, of Andes, last year and like the big party given for Dr John A. Miller, of Roscoe, to mark his half century of medical practice.

#### Dutchess County

A three-reel movie entitled "Eclampsia" was shown at the regular meeting of the Dutchess County Medical Society held at the Amrita Club in Poughkeepsie on March 13. Dr Joseph DeLee, chief of staff of the Lying-In Hospital, Chicago, exhibited the pictures, which have been approved by the American College of Surgeons. The film illustrated a talk on "The Science and Art of Obstetrics."

The seventy members present passed upon the proposed revision of bylaws, which will bring them up to date, according to Dr H. P. Carpenter, secretary and treasurer of the society. Before they can go into effect, however, they must be approved at the annual meeting of the Medical Society of the State of New York.

#### Erie County

Although dissatisfied with many of the plan's features, the Medical Society of the County of Erie on March 18 approved a six-month trial period for the medical welfare plan of the State Department of Welfare for Erie County solely in the hope that it may provide a base for a "more equitable" arrangement after that time, according to the *Buffalo Evening News*.

The average allotment of \$3.83 per relief family for home calls during the year was assailed as "ridiculously inadequate and a joke," but the plan finally was approved by a 2-to-1 vote after a lengthy meeting in the Hotel Statler. The dissenting members argued that the suggested rate of \$3.83 is inadequate when compared with approximately \$17 that the county now pays for the same service.

Under the plan, based on one-half of the case-load of 20,000 families, the county and state would allow \$38,300 for home calls made on a fee system. The \$3.83 per family allowance was arrived at, it was said, by a study of similar costs in New York City.

In addition to the \$38,300 for home calls, the plan also calls for the hiring of eight salaried physicians at \$1,200 annually, four pharmacists at \$1,400, provides \$6,400 for drugs and medicines and allows \$22,200 for an administrative staff, making a total of \$82,600. The state would reimburse the county 40 per cent of this.

It was emphasized that a deciding factor in the society's acceptance of the plan was the recognition by the State Department of Welfare of the principle that the indigent patient has the right to be cared for in the home by a physician of his own choice.

Dr Harvey P. Hoffman was elected the first president of the Western New York Medical Plan, Inc., on March 26 at a meeting of the board of trustees in the Hotel Statler as reported in Buffalo newspapers. He had served as temporary chairman during the period of the plan's formation.

Other officers elected are vice-president, Dr L. L. Klostermyer, Warsaw, secretary, Dr Harold F. Brown, and treasurer, Merrill E. Skinner. Members of the executive committee, besides Dr Hoffman, Dr Brown, and Mr Skinner, who are serving ex-officio, are Dr Carlton E. Wertz, Dr Walter L. Machemer, Assemblyman R. Foster Piper and Dr J. Louis Preston, of Salamanca.

Dr George R. Critchlow, medical director of the Western New York Medical Indemnity Plan, reported that 509 physicians thus far have signed contracts to practice under the plan. A total of 245 persons have been enrolled.

He announced the election of these persons to the board of trustees: Dr A. H. Aaron, Dr Guess Dr O'Gorman, Dr Louise W. Beamish, Dr Harold F. Brown, Dr Julius Y. Cohen, Dr Harvey P. Hoffman, Dr Walter L. Machemer, Dr Carlton E. Wertz, Dr Manford K. Hardy, of Rushford.

Dr J. Louis Preston, Salamanca, Dr G. Henry Knoll, Le Roy, Dr John S. Roche, Medina, Dr George S. Baker, Castile, Allan Williams, Olean, George Bowen, Medina, Seeley Pratt, Le Roy, Herbert Reed Albion, Daniel Tomlinson, Batavia, Walter J. Brummark, Buffalo, Assemblyman R. Foster Piper, Hamburg, and Joseph A. Wechter and D. Rumsey Wheeler, both of Buffalo.

Other speakers at the meeting included Dr Harvey P. Hoffman, president of the Western New York Medical Indemnity Plan, and Carl A. Metzger, executive director of the Western New York Hospital Service Corporation. Dr Herbert E. Wells presided.

#### Franklin County

The spring meeting of the Franklin County Medical Society was held on April 3, with a luncheon at 1 o'clock at the Franklin Hotel.

The scientific session was at 2 o'clock in the nurses' classroom at the Alice Hyde Hospital. The speaker was Dr Douglas Taylor, of Montreal, whose subject was "Arthritis and Rheumatism, Their Diagnosis and Treatment."

Dr Warriner W. Woodruff was elected president of the Saranac Lake Medical Society at their annual meeting and election of officers in the John Black Room at the Saranac Laboratory on March 27.

Other members elected were Dr Arthur Vorwald, vice-president, and Dr LeRoy H. Wardner, secretary and treasurer.

The guest speaker at the dinner was Dr Ezra Bridge, of Iola Sanatorium at Rochester, who gave a talk on "Pulmonary Case Hunting with Photographic Roentgenography."

#### Fulton County

A special course of five lectures on heart disease held at the Eccentric Club, was arranged for the members of the Fulton County Medical Society, each Friday evening beginning March 29 through April 26. The speakers were five doctors from the New York University College of Medicine.

The course was held under sponsorship of the Council Committee on Public Health and Education of the Medical Society of the State of New York. Dr John W. Vekoff and Dr C. E. de la Chapelle were in charge of arrangements.

### Jefferson County

The Jefferson County Medical Society met on March 14 at the Black River Valley Club. A paper on "The Mismanagement of Common Obstetrical and Gynecological Problems" was given by Dr Robert N Ritchie, associate professor of obstetrics and gynecology, University of Rochester, New York. At 5 P.M. a tumor conference was held at Mercy Hospital.

### Kings County

Mutual problems confronting the medical and dental professions were discussed on March 19 as more than three hundred members of the Kings County Medical Society and the Second District Dental Society of the State of New York gathered at their first joint meeting since 1930.

The session, held in the medical group's quarters, 1313 Bedford Ave., also featured the awarding of two prizes of \$25 each offered by Dr Daniel A McAteer, president of the medical society, and Dr Philip I Nash, former president, for papers on medical subjects.

The scientific program was as follows: "Dental Problems as They Affect the Physician," by Dr Gustaf B Johnson, "Medical Problems in Dentistry," by Dr Albert F R Andresen, "Surgical Aspects of Diseases of Oral Origin," by Dr Walter A Coakley, "Dental Diagnostic Problems," by Dr Charles A Wilkie.

Dr McAteer's prize went to Dr Barnett A Greene, anesthetist at the Brooklyn Cancer Institute, for an article on "Intravenous Anesthesia and Analgesia," and Dr Nash's award was given to Dr G P Shafiroff, assisting visiting surgeon at Caledonian Hospital, for his paper, "A Chemical Study of the Human Thyroid Gland."

The Friday afternoon lectures in April at the MacNaughton Auditorium were April 5—"Treatment of Varicose Veins," by Dr William M. Cooper, April 12—"Diagnosis and Treatment of Low Back Pain," by Dr Donald E McKenna, April 19—"Practical Therapeutics," by Dr Harold T Hyman, April 26—"Diagnosis and Therapeutic Aspects of Common Foot Disorders," by Dr Reuben H Gross.

### Monroe County

Rochester's mortality rate for mothers at the time of childbirth is now the lowest of any city in the country, Dr James K. Quigley, obstetrician, told a meeting of the Public Health Committee of the county medical society, March 12.

For the last six months the death rate for mothers at childbirth has been 1.9 per 1,000 as compared to 2.9 the previous six months and 4.1 in 1933, he said.

Dr Quigley, chairman of the Maternal Welfare Committee for the medical group for the last 10 years, accounted for the low rate by declaring 91 per cent of the births in Rochester in the last six months occurred in hospitals.

The scientific session of the Monroe County Medical Society on March 19, in charge of the Public Health Committee, of which Dr Benjamin J Slater is chairman, brought an address by Dr Wilson G Smilie, Cornell Medical College, on "Trends in Public Health." Discussion was led by Dr Oliver H Mitchell, Syracuse University Medical School.

Dr Morris Fishbein, editor of the *Journal of the American Medical Association*, outlined "Medicine's Contribution to Civilization" in the Rochester Academy of Medicine at 4 P.M., Sunday, March 31. The meeting was open to the public as well as the museum with its exhibits on heart diseases and maternal mortality. Stethoscopes, electrocardiograph machines, and other devices were displayed.

Sponsors of the exhibit and lecture were the Monroe County Medical Society, Academy of Medicine, and University of Rochester Medical School. Dr Sol Davidson headed the committee in charge.

### Nassau County

Emotional conflict, as an important, newly discovered contributing cause in arthritis, was disclosed by Dr Loring T Swann, of Boston, in a paper read before the Nassau County Medical Society at the Cathedral House, Garden City, on March 26.

Pointing out that there are now 6,850,000 sufferers from the disease in the United States and that each requires at least one person to care for him because most of the treatment takes place in the home, Dr Swann estimated that 92,000,000 working days are lost annually by persons suffering with arthritis.

The emotional conflict cause, he said, has been revealed as a result of concentrated study by medical authorities, who have found that marital, financial, and other difficulties, as well as anger and fear, intensify the ravages of arthritis.

Women are five times as susceptible to the disease as men, the disease being most likely to occur between the ages of twenty and forty.

Nassau county will be used as a testing ground in a scientific survey of infant and maternal hygiene, which may take as long as two years, it was revealed at the session of the county society.

The survey, sponsored by the state and county health departments, will have the full cooperation of the medical society which, for the past several years has been doing similar work as a major part of its program.

The plan, which originated in the state health department, was outlined by Dr Eugene Calvelli, of Port Washington, president of the society, in the report of the executive committee. The doctors endorsed the plan and voted their cooperation in resolutions passed at the session.

The medical society's part of the survey will be conducted under the guidance of the maternal welfare subcommittee of the society's public health committee. Dr George B Granger, of Rockville Centre, chairman of the maternal welfare unit, was empowered to appoint a committee to represent the society in the cooperative research.

### New York County

The topics and speakers at the monthly meeting of the Medical Society of the County of New York on March 25 were as follows: (1) "The Fluoroscopic Diagnosis of Coronary Artery Occlusion," by Dr Arthur M Master, discussion by Dr Robert H Halsey, (2) "The Milk Commission of the Medical Society of the County of New York," by Dr Edward S Rimer.

The dates of the next Graduate Fortnight of the New York Academy of Medicine will be

October 14-25, 1940, and the subject, "Medical and Surgical Aspects of Infections"

The French Medical Society of New York is being formed, its chief object to promote the union and friendly intercourse among French-speaking physicians, regardless of nationality. Those interested in joining this new medical group will kindly communicate, between 6 and 7 P.M., with Dr. Marcel Pahmer, 574 West End Avenue, New York City.

On Saturday evening, April 20, the combined New York and Brooklyn-Long Island chapters of the Pan-American Medical Association held a supper-dance at the Hotel Pierre, Fifth Avenue and 61st Street, New York City.

On July 1 Dr. Haven Emerson, former city health commissioner, will retire as director of De Lamar Institute of Public Health at Columbia University and be succeeded by Dr. Harry Stoll Mustard, at present, professor of preventive medicine in the New York University College of Medicine. Dr. Emerson is professor of public health practice, the position also to be taken over by the new incumbent.

The drive for reduced infant and maternal deaths, credited with giving the city currently the lowest recorded mortality rates, is in serious danger of being halted by lack of funds.

From \$6,000 to \$7,800 a year is needed to carry on the work, Dr. Locke L. Mackenzie, chairman of the New York County Medical Society's special committee on infant mortality, explains, but no source can be found.

In past years the money needed for the drive was supplied by grants from the Commonwealth Fund and surplus Social Security moneys in the state's treasury. Both of these sources have run dry.

Dr. Thomas Drysdale Buchanan, dean of New York anesthetists and the oldest practicing physician in the city to devote his time solely to anesthesia, died at his home, 2345 Broadway, after a heart attack, at the age of sixty-four.

Since the turn of the century Dr. Buchanan had been in the forefront of American anesthesiology. In 1903 he introduced into this country from England the "midget cylinders" that made possible portable anesthetic equipment, and he had served as chief anesthetist or consulting anesthetist to many of the leading hospitals in the city.

During the World War he was in charge of anesthesia for the United States Army with headquarters in Washington and was anesthetist for both the Department of Charities and the Department of Correction of New York. His most recent activity in his field was the founding in 1937 of the American Society of Anesthetists, Inc., and he had been president of the American Board of Anesthesiology since its organization the same year.

#### Niagara County

Dr. C. Arthur Elden, of the University of Rochester faculty and Strong Memorial Hospital, Rochester, was the principal speaker at a meeting of the Medical Society of the County of Niagara at the Tuscarora Club, Lockport, on March 12. Dr. Elden associate professor of obstetrics and gynecology at the University of Rochester,

discussed "Endocrine Preparations." In addition, a technicolor and sound film entitled "Gonadogen" was presented through the courtesy of the Upjohn Company.

The Niagara County Medical society will delay, for a year at least, the adoption of a group medical plan offered by the Western New York Plan, Inc., and in the meantime will endeavor to work out an insurance plan which will meet the needs of those in low income groups as well as those of higher income, it is announced by Dr. Forrest W. Barry, Lockport, secretary.

"The Medical Society of New York State has endorsed the principle of voluntary insurance against medical and surgical costs," Dr. Barry said. "The Medical Society of Niagara County has endorsed this principle and has had a committee working for the last year considering the feasibility of some plan to protect sick persons against medical costs."

"A plan was offered to the Niagara Medical Society, by the Western New York Insurance plan but, after some discussion by the society, it was thought that the plan offered did not go far enough as it did not provide for the case of the great number of persons in the low income groups. Hence our decision to study the plan further."

#### Oneida County

Medical and Surgical Care, Inc., which will serve twelve counties in central and northern New York State, with headquarters in Oneida County, has begun operation.

Two plans are available at two prices and in each instance maximum benefits during a contract year may amount to as much as \$225.

Under Plan 1, subscribers may have the physician in the home, office, or hospital. Benefits include twelve maternity postnatal calls, necessary prenatal care and delivery of baby, also care of the newborn baby for twelve days, one-half the cost of thirty physical therapy treatments, no limit of anesthesia, \$50 of x-ray diagnosis for each enrolled person, \$50 of x-ray therapy and radium treatments for each person enrolled, \$35 of laboratory examinations in office or hospital for each person enrolled, one-half of the cost of tests for treatments for allergy and surgery up to \$225.

Under Plan 2, subscribers may receive medical and surgical care in the hospital. Benefits include twelve maternity postnatal calls, necessary prenatal care and delivery of baby, also care of newborn baby for twelve days, \$25 of anesthesia services for each one enrolled, \$40 of physicians' calls in an approved hospital for medical illness for each one enrolled, in addition to maternity and surgery after-care, \$20 of physicians' calls in home or office when necessary within thirty days after discharge from hospital, \$25 of x-ray services and radium treatments, \$25 of laboratory examinations in hospital, and surgery up to \$225.

The cost under Plan 2 is 80 cents a month for the gainfully employed subscriber, 75 cents for the spouse and each dependent between the ages of sixteen and eighteen, and 60 cents for all the children of the subscriber under sixteen years, regardless of number.

The cost under Plan 1 is \$1.40 per month for the gainfully employed person, \$1.15 for the spouse and each dependent between the ages of

sixteen and eighteen years, and 75 cents for all the children of the subscriber under sixteen years, regardless of number

Officers of Medical and Surgical Care, Inc., are president, Dr F M Miller, Jr., first vice-president, Dr H N Squer, second vice-president, Dr J F Kelley, treasurer, Charles W Hall, and secretary, Walter F Roberts

The board of directors is composed of Edward C Cluney, Nicholas E Devereux, Albert O Foster, Dr Arthur R Grant, Dr William Hale, J David Hogue, Dr Hyzer Jones, Dr J B Lawler, Dr Dan Mellen, Rome, Dr F M Miller, F E Richmond, Rome, Dr Robert Warner and Michael Yust

### Onondaga County

Speaking on "Recent Advances in Pediatrics," Dr Charles A Weymuller, of Brooklyn, presented the principal address at the dinner meeting of the Onondaga County Medical Society in the University Club of Syracuse on April 2 Dr Weymuller, chief of the department of pediatrics at the Long Island College Hospital and professor of pediatrics at the medical school of Long Island College, was introduced by Dr Brewster C Doust, president of the society and toastmaster

### Ontario County

Dr Hubbard K Meyers entertained the Canandaigua Medical Society on March 14 in the Canandaigua Hotel Dinner was followed by the business meeting and a paper by the president, Dr Philip M Standish, on "Eczema in Children"

### Oswego County

Dentistry was described as an integral part of the medical profession in a talk given by Dr H M Wallace, president of the Oswego County Medical Society, before members of the Oswego Dental Society at a dinner meeting at Hotel Pontiac on March 11

The affair, similar to celebrations being held all over the country, marked the centennial anniversary of dentistry in America Dr Howard Crandall presided in the absence of the president, Dr Charles E Halsey

### Otsego County

The March meeting of the Otsego County Medical Society was held at the Cooper Inn, Cooperstown, on March 13

At the scientific session Dr William A Milner, urologist, Albany City Hospital, spoke on transurethral prostatic resection, report of 600 cases

### Queens County

Doctors should take an active interest in local government and party politics to work for the betterment of health in their communities, urged Dr Nathan B Van Etten, president-elect of the American Medical Assn, on April 3, in a speech before the Queens Council for Social Welfare in Forest Hills

Speaking under auspices of the Queens County Medical Society and its auxiliary, Dr Van Etten stressed the need for active participation by physicians in governmental planning and administration He also described the founding of the first American hospital by Benjamin Franklin in Philadelphia in 1752 and traced the history of American medicine.

He was introduced by Dr William T Berry of Long Island City, president of the Queens society Dr Berry also presented Dr Leverett D Bristol, health director of the American Telegraph and Telephone Company, who spoke on the responsibility of the citizen in health programs

The Queens County Bar Association met jointly with the Medical Society of the County of Queens in a program on Forensic Medicine, Tuesday evening, March 26, at the Society's building in Forest Hills The program follows "The Doctor and The Lawyer," by The Honorable Robert F Wagner, Jr., Senator, State of New York, "The Relation of the Medical Examiner's Office to the Public, the Law, and Medicine," by Dr Thomas A. Gonzales, chief medical examiner of the City of New York, "The Role of the Physician in the Prevention of Crime," by Charles P Sullivan, Esq., district attorney, Queens County, remarks by Ben Weichselbaum, Esq., president, Queens County Bar Association, Harry I Huber, Esq., counsel to Medical Society of the County of Queens, Inc., and Dr William T Berry, president, Medical Society of the County of Queens, Inc

The Queens County Medical Society held its annual beefsteak and dance," Saturday, March 30, 9 P M at the society's building

### Rensselaer County

Dr Howard Moloy chief roentgenologist at the Sloane Hospital and Columbia Presbyterian Medical Center in New York City, was the guest speaker at the meeting of the Rensselaer County Medical Society in the Health Center, Troy, on March 12

Dr Moloy spoke on "Pelvic Abnormalities and Their Obstetric Significance"

Taking part in the discussion after his address were Dr Thomas O Gamble and Dr I J Murnane, of Albany, Dr William M Malba, of Schenectady, and Dr Charles R Lewis and Dr Orville L Henderson, of Troy Presiding at the meeting was Dr Charles W Hamm, president.

### Richmond County

Talks by two Manhattan physicians featured a meeting of the Richmond County Medical Society on March 13 in the Richmond Health Center, Stuyvesant Place, St George. Dr H A Cochrane presided.

Dr Katherine G Dodge, chief of the children's cardiac clinic at Bellevue Hospital, spoke on "Diagnosis and Treatment of Early Rheumatic Fever in Children" The topic of the other speaker, Dr Paul Kurt Sauer, was "Remarks on Cryomotherapy"

### Schenectady County

Members of the Schenectady County Medical Society met on April 2 in the auditorium of the Ellis Hospital Nurses' Home to hear addresses by two New York City physicians on coronary diseases Dr Samuel A Thompson spoke on

"The Surgical Treatment of Coronary Artery Disease with Special Reference to Cardiopercutaneous Coronary Bypass" and Dr Milton J Rausdeck on

"The Selection and Postoperative Management of Patients in the Surgical Treatment of Coronary Disease." Colored motion pictures and slides were used to illustrate the addresses

Representatives of the medical profession and the state legislature agreed that New York State should assume increasing responsibility for the support of public health and medical care of 'medically indigent' persons, in their discussion before the forty-second Empire State Town Meeting at Union College, Schenectady, on March 10.

Dr James F. Rooney, of Albany, past-president of the Medical Society of the State of New York, however, emphasized that "there has never been adduced any evidence that any revolutionary change in the present practice of medicine is either needed or desirable. No scheme can ever be effective that makes essential changes in the personal relation of physician and patient or sacrifices the patient's freedom of choice of a physician."

Assemblyman Lee B. Mailer, of Cornwall, chairman of the joint legislative commission which was given \$40,000 to investigate and formulate a long-range health program for the state, asserted that he agreed no plan should be adopted that would sacrifice the freedom of choice of a physician in "small communities," but said that he favored the assignment of physicians to areas of population in such great metropolitan centers as New York City where the personal relationship between doctors and patients is not as close as upstate.

Dr Rooney objected to this on the ground that a human being is the same in New York City as in Essex county or other sparsely settled region. A patient is a person with a soul as well as a receptacle for chemical treatments."

Both speakers led the discussion on what should be the long range health program for the state. Both agreed that compulsory insurance was not satisfactory, but both agreed that a system of voluntary medical insurance similar to the "hospitalization" plan would be helpful to those in the middle classes who cannot afford satisfactory medical treatment.

#### Steuben County

Papers on gallbladder and biliary tract diseases, and a moving picture on eclampsia were program features for the meeting of the Steuben County Medical Society at the Baron Steuben Hotel in Corning, on March 14.

The speakers were Dr Frank Meyers of Buffalo and Dr J. Sutton Regan, who discussed diagnosis and treatment of gallbladder and biliary tract disease from the medical and surgical standpoint respectively.

#### Suffolk County

Dr Hugh Halsey, who died in Montclair, New Jersey, on March 21, at the age of seventy-six practiced medicine in Southampton for over forty years. He was founder and a former president of the Associated Physicians of Long Island.

#### Tioga County

A special course of lectures on 'Hemorrhage' was arranged in March and April for the Tioga County Medical Society by Dr A. F. R. Andresen, of Brooklyn from the Department of Medicine, Long Island College of Medicine.

#### Washington County

The Medical Society of Washington County held its Spring meeting at the Hudson Falls Court House on April 2, with Dr Vernon K. Irvine, president, presiding.

Dr F. Leslie Sullivan, of Scotia, president of the Schenectady Medical Society and proctologist at the Schenectady City Hospital, spoke.

J. J. Cronin, of Glens Falls, gave "The History and Development of Social Security."

Dr Mott, of Washington, D. C., spoke on Consideration of the Report of the Special Committee on the Farm Security Program in Washington County.

#### Wayne County

The April meeting of the Wayne County Medical Society was held on April 2 at the Wayne Hotel in Lyons. The scientific program included a paper on "Management of Bleeding Ulcers," by Dr Harry Segal, assistant professor of medicine at the Rochester School of Medicine.

#### Westchester County

The Westchester County Medical Society is on record demanding freedom of patients on relief rolls to choose their own physician for medical care. Action was recorded by unanimous vote in executive session at the society's monthly meeting at the New York Hospital Westchester Division, on March 19.

The resolution stated that 'the right of any individual to choose his own physician has been accepted by custom' and is 'on a parity with the right of the individual to freedom of speech, freedom of the press and peaceable assembly'. It pointed out that the Workmen's Compensation Law guarantees this right to injured workmen and argued that failure of the Legislature to incorporate a similar guarantee in the Public Welfare Law discriminates unjustly against other individuals equally in need of medical care of a like quality merely because they suffer from the fortuitous circumstance of illness rather than injury,' and accordingly, that the Public Welfare Law 'is in practice unjust, discriminatory and in violation of the spirit and intent of the Constitution of the State of New York, being a violation of the civil liberties of residents of the State and a menace to the proper and free science art and practice of medicine within the State.' The State Medical Society was urged to take steps to bring about an amendment to the Public Welfare Law accordingly.

A number of welfare officers and representatives of the county medical society have developed a cooperative program of medical welfare administration for Westchester and it was announced that more than 300 physicians have signified their desire to serve under this plan shortly to be put into effect in several welfare jurisdictions in the county. The plan guarantees freedom of choice of physician and assures close professional supervision of the character and quality of services delivered.

The speakers of the evening were Dr Samuel A. Thompson and Dr Milton J. Raisbeck, both of the staff of Flower-Fifth Avenue Hospital in New York City, who presented papers describing a new operation used in treating certain types of heart disease.

# Workmen's Compensation

WE HAVE been informed by the Secretary of the Compensation Insurance Rating Board that the resolution adopted on January 30, 1940, by the Compensation Insurance Rating Board on the payment of doctors' bills in compensation cases, where the period of disability is less than seven days, has been ratified by the Medical and Claims Committee of the Compensation Insurance Rating Board at a meeting held on March 14, 1940

The resolution is as follows

RESOLVED That it is the sense of the Medical and Claims Committee that medical bills should be honored by the carriers in all cases in which disability does not exceed seven days provided there has been submitted to the Department by the Carrier Form C-6

(notice to the Industrial Commissioner that the payment of compensation has begun without awaiting award of Industrial Board) or Form C-7-A (report to the Industrial Commissioner of reason payment of compensation has not begun) and provided such conform to all provisions of law as to reasonableness, timeliness of reports and otherwise, and further that all carriers be notified to this effect

In other words, only medical bills in cases in which a C-7 is filed, indicating controversy to be determined at a hearing before the referee of the Department of Labor or the Industrial Board, will be held up pending determination of accident or causal relationship

DAVID J. KALISKI, M D, Director

## "BOOTLEG CHIROPRACTORS"

Chiropractors appeared before the Virginia Legislature in force at a recent hearing of a bill designed to establish an independent board in the state. The occasion was remarkable, relates the *Virginia Medical Monthly*, not only for the fact that the bill was actually reported out of the committee—only heroic effort on the part of the society's Legislative Committee secured its recommittal—but for the fact that no less than seventy chiropractors are said to have openly boasted before the law makers of illegally practicing their profession in Virginia.

This mass confession suggests that the only final and effective method of eliminating this cult from the state is a more vigorous prosecution in the courts of all future offenders. Should the law be strengthened to include severer penalties for its infraction and should each local infraction of the law be summarily dealt with, the people of Virginia would be quickly rid of a cult whose existence within the state presents a hazard to health hitherto only vaguely appreciated.

## INDUSTRIAL PHYSICIANS TO CONVENT

The twenty-fifth annual meeting of The American Association of Industrial Physicians and Surgeons, together with the first annual meeting of The American Industrial Hygiene Association, will be held at Hotel Pennsylvania, New York City, June 4, 5, 6, and 7, 1940. This will be a four-day convention intensively devoted to the problems of industrial health in all of their various medical, technical, and hygienic phases, with particular stress on prevention and control of occupational hazards. Important programs have been prepared, and technical and scientific exhibits will be a feature of the convention.

The dinner on Thursday evening, June 6, will be the occasion of the presentation of the Wm S Knudsen award for the year 1939-1940. The medical profession is not only invited but urged to attend these gatherings as they will be of unusual interest and value to all practitioners interested in industrial injuries and illnesses.

## Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Peter C. Blas	66	Rome	April 3	Mount Vernon
Nelson Borst	82	P & S N Y	March 28	Poughkeepsie
John N. Boyce	66	P & S N Y	March 29	Poughkeepsie
Bruce L. D. Cook	65	Buffalo	March 18	Buffalo
Thomas P. Farmer	57	Syracuse	April 12	Syracuse
Herbert R. Flint	86	Buffalo	March 28	Hornell
Samuel Frank	62	L I C Hosp	April 5	Brooklyn
J. Loyd Golly	53	Syracuse	March 17	Rome
David B. Hirschfeld	60	Cornell	April 8	Manhattan
Joseph Montandon	73	Naples	March 14	Newburgh
Joshua Rosett	64	Maryland	April 4	Manhattan
Bond Stow	74	Northwestern	March 28	Crestwood
Frederick N. Whitehorne	67	P & S N Y	April 6	Manhattan

# The Woman's Auxiliary

To the Medical Society of the State of New York

**A** LAST REMINDER to make your reservation for the eighteenth annual convention of the Woman's Auxiliary to the American Medical Association to be held at the Hotel Pennsylvania,

New York City, June 10 to 14, 1940 New York has much to offer aside from the convention, and we are sure you will not want to miss the opportunity of visiting New York this year "

## County News

### Broome County

Despite flood conditions which made travel precarious, a large group of the Broome County Auxiliary members met at the Ideal Hospital Nurses' Home for the April meeting. Dr Robert Plunkett, of the State Tuberculosis Organization, was the guest speaker and explained the aims and methods of the state in the fight against tuberculosis.

The auxiliary will participate in the Hobby Show at the State Convention in May. The work of the Women's Field Army for the Control of Cancer is to be done by the auxiliary.

The May meeting will be a social affair with dinner at the Binghamton Club. All the doctors and their wives will be entertained. Dr Fisher will give an address after dinner.

### Columbia County

The 1940 meetings of the Columbia County Auxiliary have been interesting and well attended. In January Mrs Albert Van der Veer, state chairman of the Legislative Committee, was the guest speaker and brought information regarding medical legislation. At the February luncheon meeting the guest speaker was Dr Marion F Lowe, of Albany, assistant director of Maternity, Infant, and Child Hygiene of New York State Department of Health. Each member of the auxiliary was permitted to bring two guests to the meeting. Guests were also invited to the March meeting to hear Mrs Howard Rainey review several new books.

### Cayuga County

At the recent meeting of the Woman's Auxiliary to the Cayuga County Medical Society, Mrs D J Sands presided in the absence of the president, Mrs G C Sincerbeaux. Contributions were again made for the Physicians' Home. The guest speaker was Miss Ann Dyer, executive secretary of the American Red Cross in Cayuga County. Miss Dyer gave a brief history of the Red Cross and then told of the work done in Cayuga County. The special work for this winter has been the making of seven thousand garments, knitted and cloth, for the war refugees of Europe. Auxiliary members have offered their services to the Red Cross whenever needed.

### Fulton County

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Miss Helen Watkins, chairman of Orange County Public Health Committee, showed several sound films owned by the committee.



# Workmen's Compensation

WE HAVE been informed by the Secretary of the Compensation Insurance Rating Board that the resolution adopted on January 30, 1940, by the Compensation Insurance Rating Board on the payment of doctors' bills in compensation cases, where the period of disability is less than seven days, has been ratified by the Medical and Claims Committee of the Compensation Insurance Rating Board at a meeting held on March 14, 1940

The resolution is as follows

RESOLVED That it is the sense of the Medical and Claims Committee that medical bills should be honored by the carriers in all cases in which disability does not exceed seven days provided there has been submitted to the Department by the Carrier Form C-6

(notice to the Industrial Commissioner that the payment of compensation has begun without awaiting award of Industrial Board) or Form C-7-A (report to the Industrial Commissioner of reason payment of compensation has not begun) and provided such conform to all provisions of law as to reasonableness, timeliness of reports and otherwise, and further that all carriers be notified to this effect

In other words, only medical bills in cases in which a C-7 is filed, indicating controversy to be determined at a hearing before the referee of the Department of Labor or the Industrial Board, will be held up pending determination of accident or causal relationship

DAVID J KALISKEI, M D, Director

## "BOOTLEG CHIROPRACTORS"

Chiropractors appeared before the Virginia Legislature in force at a recent hearing of a bill designed to establish an independent board in the state. The occasion was remarkable, relates the *Virginia Medical Monthly*, not only for the fact that the bill was actually reported out of the committee—only heroic effort on the part of the society's Legislative Committee secured its recommittal—but for the fact that no less than seventy chiropractors are said to have openly boasted before the law makers of illegally practicing their profession in Virginia

This mass confession suggests that the only final and effective method of eliminating this cult from the state is a more vigorous prosecution in the courts of all future offenders. Should the law be strengthened to include severer penalties for its infraction and should each local infraction of the law be summarily dealt with, the people of Virginia would be quickly rid of a cult whose existence within the state presents a hazard to health hitherto only vaguely appreciated

## INDUSTRIAL PHYSICIANS TO CONVENE

The twenty-fifth annual meeting of The American Association of Industrial Physicians and Surgeons, together with the first annual meeting of The American Industrial Hygiene Association, will be held at Hotel Pennsylvania, New York City, June 4, 5, 6, and 7, 1940. This will be a four-day convention intensively devoted to the problems of industrial health in all of their various medical, technical, and hygiene phases, with particular stress on prevention and control of occupational hazards. Important programs have been prepared, and technical and scientific exhibits will be a feature of the convention

The dinner on Thursday evening, June 6, will be the occasion of the presentation of the Wm S Knudsen award for the year 1939-1940. The medical profession is not only invited but urged to attend these gatherings as they will be of unusual interest and value to all practitioners interested in industrial injuries and illnesses

## Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Peter C Blas	66	Rome	April 3	Mount Vernon
Nelson Borst	82	P & S N Y	March 28	Poughkeepsie
John N Boyce	66	P & S N Y	March 29	Poughkeepsie
Bruce L D Cook	65	Buffalo	March 18	Buffalo
Thomas P Farmer	57	Syracuse	April 12	Syracuse
Herbert R Flint	86	Buffalo	March 28	Hornell
Samuel Frank	62	L I C Hosp	April 5	Brooklyn
J Loyd Golly	53	Syracuse	March 17	Rome
David B Hirschfeld	60	Cornell	April 8	Manhattan
Joseph Montandon	73	Naples	March 14	Newburgh
Joshua Rosett	64	Maryland	April 4	Manhattan
Bond Stow	74	Northwestern	March 28	Crestwood
Frederick N Whitehorse	67	P & S N Y	April 6	Manhattan

# The Woman's Auxiliary

To the Medical Society of the State of New York

"A LAST REMINDER to make your reservation for the eighteenth annual convention of the Woman's Auxiliary to the American Medical Association to be held at the Hotel Pennsylvania,

New York City, June 10 to 14, 1940 New York has much to offer aside from the convention, and we are sure you will not want to miss the opportunity of visiting New York this year "

## County News

### Broome County

Despite flood conditions which made travel precarious, a large group of the Broome County Auxiliary members met at the Ideal Hospital Nurses' Home for the April meeting Dr Robert Plunkett, of the State Tuberculosis Organization, was the guest speaker and explained the aims and methods of the state in the fight against tuberculosis

The auxiliary will participate in the Hobby Show at the State Convention in May The work of the Women's Field Army for the Control of Cancer is to be done by the auxiliary

The May meeting will be a social affair with dinner at the Binghamton Club All the doctors and their wives will be entertained Dr Fisher will give an address after dinner

### Columbia County

The 1940 meetings of the Columbia County Auxiliary have been interesting and well attended In January Mrs Albert Van der Veer, state chairman of the Legislative Committee, was the guest speaker and brought information regarding medical legislation At the February luncheon meeting the guest speaker was Dr Marion F Lowe, of Albany, assistant director of Maternity, Infant, and Child Hygiene of New York State Department of Health Each member of the auxiliary was permitted to bring two guests to the meeting Guests were also invited to the March meeting to hear Mrs Howard Raney review several new books

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Miss Helen Watkins, chairman of Orange County Public Health Committee, showed several sound films owned by the committee.

### Queens County

The Queens County Auxiliary had the honor of being hostess to the state president, Mrs G Scott Towne, at a meeting in January. Mrs Towne discussed the general work of medical society auxiliaries. At the same meeting Mrs Carlton Potter, chairman of auxiliary arrangements for the A M A Convention in June, told of plans made for the auxiliary participation. Mrs John L Bauer spoke on "The Physicians' Home." During her visit, Mrs Towne was entertained at tea and dinner by members of the auxiliary.

A successful bridge-tea was held during February. At the February meeting the members were entertained by a monologist. Six new members were welcomed at this meeting. Mrs Raymond Murphy, president of the auxiliary, Mrs James Dobbins, and Mrs Daniel Swan attended the meeting of the state auxiliary executive board.

Supreme Court Justice Peter M Daly was the guest speaker at the March meeting. Mrs Harold Foster was chosen chairman of hobbies for the state convention in May. Plans were made for an "Information Please" program at the May meeting.

### Rensselaer County

The Woman's Auxiliary to the Rensselaer County Medical Society held the March meeting at the Troy Hospital. The guest speaker was Eric Gibberd, who had as his topic "Developing Community Personality." The meeting was in the form of an "Information Please" quiz on health subjects.

Mrs Stephen Curtis, president, conducted the business meeting and appointed chairmen of standing committees. These are: Mrs Arthur Benson, legislation; Mrs Oney Smith, press and publicity; Mrs Peter Harvie, program; Mrs Helmer Howd, membership; Mrs Victor Jacobsen, health and public relations; Mrs J A Zeph, Hygeia; Mrs Charles E Bessey, hospitality; Mrs C L Gifford, finance; Mrs W W St John, special correspondence. Dr

Stephen Curtis, Dr J J Rainey, Dr Peter Harvie, Dr Eugene Connally, and Dr George Hoffeld were named advisory councilors.

At the April meeting Mr Dwight Anderson was the guest speaker and had for his topic "Socialized Medicine." Mr Anderson is director of public relations for the New York State Medical Society.

Mrs Curtis, president, announced that Mrs N F Brignola had been appointed chairman of the hobby show for the State Convention in May. The auxiliary plans to hold a dinner dance at the Troy Country Club in May. Mrs. James Donnelly appealed to the auxiliary for cooperation in the Community Chest drive.

### Rockland County

The April meeting of the Rockland County Auxiliary was held at the Colonial House in Nanuet. Dr Robert Felter was the guest speaker and spoke on the changes in medical practice. His talk was composed of a series of sketches recalling incidents in his career as teacher and doctor from the horse and buggy days to the present.

Mrs Dingman, president, presided. Mrs George Richards was appointed hobby show chairman for the State Convention. Mrs S W S Toms, state public relations chairman, has been invited to assist at the state auxiliary luncheon in May. Election and installation of officers will take place at the next meeting in May.

### Schenectady County

The Schenectady County Auxiliary met in March with Mrs Albert Van der Veer as guest speaker. Mrs Van der Veer spoke on "Medical Legislation." Delegates were elected to attend the State Convention in May as follows: Mrs William Mallia, Mrs Herman Galster, Mrs Albert Green, Mrs Leslie Sullivan, Mrs Joseph Cornell, and Mrs Arthur Congdon. Alternates are Mrs James Dunn, Mrs Charles Woodall, Mrs C F Rourke and Mrs Edwin Stanton.

## Letter from the President

### Dear Auxiliary Members

The advent of the 1940 Convention on May 6 sees also the exit of the present Executive Board.

On behalf of that board, I thank you all for the fine spirit of cooperation and interest that you have shown in the work of the auxiliary this past year.

However hard the various officers and chairmen might have worked, however great their interest, it would have proved of little avail if they had not had the auxiliary members working hand in hand with them.

Whatever good has been accomplished has come about through the combined efforts of the executive board and the auxiliary as a whole.

We believe that we have progressed this year

Our number has increased, our work along health lines has been outstanding, our cooperation with the State Medical Society Legislative Chairman has been productive of good results, our philanthropies have been many and varied, and our programs have been most interesting.

It has been a real pleasure to serve you this past year, and if we have contributed ever so little to the progress of our organization, we are thankful.

For our successors we ask the same hearty cooperation, encouragement, and friendliness that we have enjoyed at your hands.

Sincerely yours,

MARY T TOWNE

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue, Brooklyn N Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers.

## RECEIVED

**Personal and Community Health.** By C E Turner, Dr.P.H. Fifth edition. Octavo of 652 pages. St. Louis, C V Mosby Co., 1939. Cloth, \$3.00.

This is the fifth edition of a book intended for health instruction at the university level. The author has devoted many years to teaching biology and hygiene, and the popularity of this volume is attested by the number of editions published.

The chapters devoted to personal health include the various physiologic topics familiar to all physicians. Community health considers subjects on mass hygiene such as food control, sewage disposal, water supply, and the like. The control of communicable diseases is presented in a verbatim copy of the Report of the Committee of the American Public Health Association on this subject, nothing better than this report could be given to the lay public.

ALFRED E SHIPLEY

**Otolaryngology in General Practice.** By Lyman G Richards, M.D. Octavo of 352 pages, illustrated. New York, Macmillan Co. 1939. Cloth, \$6.00.

Dr Richards' book is not written for the specialist nor is it a book that students perfecting themselves in the techniques of the specialty may profitably use as a guide toward improving themselves and preparing themselves to enter into the specialty of otolaryngology. It is a book that should be in the handy reference library of every practitioner of medicine, where it will serve as a guide to him in recognizing abnormal conditions in the nose, the throat and the ear, with which he is confronted in his everyday routine practice. Its careful perusal by the general practitioner will familiarize him with the lesions which he is the first to see, instruct him in the implications they hold and point the way to therapy, both medical and surgical. It will give him a speaking knowledge of these various lesions to enable him to consult intelligently with the specialist and expert when he needs help and advice in the management of his case.

The book is splendidly illustrated. The text is clear and concise. There is a delightful absence of literary padding so common in specialty books and because of the competence and experience of its author, the statements made are authoritative. This book should be on the "must" list of all interns on hospital staffs. Its educational value for these is not the least of its merits.

The book definitely accomplishes the purpose for which it was written—namely, to 'serve the general practitioner as a guide in distinguishing between those cases which he is qualified to treat and those which undeniably belong in the specialists' field."

SAMUEL J KOPETZKY

**Intracranial Tumors of Infancy and Childhood.** By Percival Bailey, Douglas N Buchanan, and Paul C Bucey. Octavo of 598 pages, illustrated. Chicago, University of Chicago Press, 1939. Cloth, \$5.00.

The authors have utilized an unselected series of consecutive cases of brain tumor in infancy and childhood verified by histologic analysis or necropsy. Intracranial tumors in infancy and childhood are predominantly subtentorial in location and gliomas in type. After the age of 16, childhood tumors rapidly decrease because the tumors common to children fall off, and adult types like neurinomas and meningiomas have not begun to appear.

The various chapters in the book discuss tumors from the point of view of location and type. It is worth mentioning the benign gliomas of the cerebellum, the astrocytomas, because they are the most frequent tumors of childhood and the most favorably located for surgery. Cushing reported an operative mortality of 2.9 per cent in the last 29 cases.

Following the specific discussion of tumors, the authors take up the general pathology and symptomatology. Vomiting occurred in 84 per cent of the cases, headache in 70 per cent, other common symptoms were diplopia and failing vision. The major findings were papilledema and optic atrophy, paralysis of the external rectus muscle, and increase in the size of the head and separation of the sutures.

This book is extremely valuable to the pediatrician and also to the general practitioner of medicine. The reviewer particularly recommends the book because each individual case is completely discussed.

• STANLEY S LAMM

**A Treatise on the Surgical Technique of Otorhinolaryngology.** By Georges Portmann. Translated by Pierre Viole, M.D. Quarto of 675 pages, illustrated. Baltimore, William Wood & Co., 1939. Cloth, \$12.50.

This volume, dealing with the operative surgery of the ear, nose, and throat, covers most of the surgical procedures in this field. The book is attractive because of its many large illustrations, at least ten of which are superfluous because they teach nothing. The student and practitioner are not interested in pictures of a surgeon in his operating gown on an operating table or a surgeon standing at the bedside of a patient.

In his attempt to be thorough the author has included procedures that are not done in this country. Although much can be learned from this well-written and nicely illustrated treatise it is unfortunate that its contents do not conform more closely to the established practices and techniques of the American otolaryngologist.

M C MYERSON

**An Introduction to Sociology and Social Problems. A Textbook for Nurses** By Deborah M Jensen, R N Octavo of 341 pages St Louis, C V Mosby Co, 1939 Cloth, \$2 75

Miss Jensen has written this book for the use of schools of nursing as a text and reference on sociology and social problems. In the introduction she points out that she is aware of the crowded curriculum and the limited time for study in nursing schools, and with this in mind she selects from these two subjects the points which she feels are of special significance to nurses.

The book is well written, and the material selected shows that the author has a keen understanding of what nurses need to know about sociology and social problems. She divides her book into two sections. In the first section she presents certain aspects of sociology. She writes "It is of great importance that nurses become intelligent students of society and that they may be equipped to consider social issues more rationally and from the point of view of the good of society as a whole and of the individual." The list of what the nurse should know about her community and the aids she gives in helping a nurse to understand the family should prove helpful to every nurse and especially to the nurse working outside of the hospital. In the second section she gives the nurse a good foundation in understanding social problems. Part I "The Individual's Reactions to Illness," should be a "must" on every nurse's reading list.

She selects excellent quotations from leaders in both these fields to illustrate her points, and at the end of each chapter there is a list of additional reference reading for the student and for the teacher. The quotations and exercises at the end of the chapters are well thought out, and should stimulate the reader not only to seek further knowledge in these two subjects but to become better acquainted with the problems her patients are facing and with the social problems in the community in which she is working.

However, it is to be regretted that Miss Jensen, with her rich background as consultant and teacher, has not taken more practical illustrations from her own experience.

RUTH G PEARL

**Varicose Veins** By Alton Ochsner, M D, and Howard Mahorner, M D. Quarto of 147 pages, illustrated St Louis, C V Mosby Co, 1939 Cloth, \$3 00

The puzzling problem of varicose veins and their treatment is considered by the authors in a clear, concise monograph of some 140-odd pages. The authors cover completely the routine chapters on pathology, physiology, anatomy, etc., and give their views in reference to the ideal treatment. The subject matter is well arranged, well illustrated, and well presented. It will serve as an authentic guide to students of the problem, who will use it, we trust, in connection with extensive practical experience.

ROBERT F BARBER

**Diseases of the Nose and Throat.** By Charles J Imperatori, M D, and Herman J Burman, M D. Second edition. Octavo of 726 pages, illustrated Philadelphia, J B Lippincott Co, 1939 Cloth, \$7 00

The second edition of this textbook should be received with even more enthusiasm than its predecessor. As in the first edition, the text reflects the senior author's many years of experience and his efficient manner of handling his subject.

Because of its completeness, it is a fine source of ready reference. To make special mention of any chapters would be unfair to the work as a whole, since many of them are unusual. Both the excellent writing and the high standard of this book are unquestionable.

MERVIN C MYERSON

**Manual of the Diseases of the Eye for Students and General Practitioners.** By Charles H May, M D. Sixteenth edition. Duodecimo of 515 pages, illustrated Baltimore, William Wood & Co, 1939 Cloth, \$4 00

In this sixteenth edition of a book, which was first published in 1900, the author, assisted by his associate, Dr Charles A Perera, again brings the work up to date. In spite of additions in material and a greater number of colored plates the size of the volume remains about as it has always been. This has been accomplished by re-vamping several of the chapters, so that the work continues to be a model of concise information smoothly written and full of "meat," never merely wordy.

As stated in the preface to the first edition the book is still offered as supplying a foundation for student and general practitioner, to which further knowledge may later be added. That it has achieved this purpose to the satisfaction of many is attested by the numerous editions, re-printings, and translations it has witnessed in its thirty-nine years of life.

In addition to its lucid text, the multiplicity of illustrations and its thirty-one colored plates give it the added value of an atlas. Since one picture is worth hundreds of words this expands its scope to a high degree. The new and modernized edition should continue to enjoy a high place in the education of those readers to whom it is dedicated.

It is now being translated into Urdu by the Osmania University, Hyderabad, India. This represents the tenth foreign language edition.

E CLIFFORD PLACE

**Anemia in Practice. Pernicious Anemia.** By William P Murphy, M D. Octavo of 344 pages, illustrated Philadelphia, W B Saunders Co, 1939 Cloth, \$5 00

From Boston, the cradle of hematology, there comes another outstanding book on the anemias, this one by Murphy, co-winner of the Nobel Prize some years ago. About one-fifth of the volume is devoted to a brief discussion of hypochromic and normocytic anemias, the remainder naturally enough to pernicious anemia and laboratory methods.

If one is looking for the best and soundest information up to the present time, if one is seeking a truly honest and critical approach to the theoretical and practical aspects of the diagnosis and treatment of anemia, this brief volume easily fulfils all requirements.

ANDREW M BABEY

# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

### A Good Veto

Governor Lehman's veto of the Goldberg bill acknowledges the enormous difference between compulsory health insurance and unemployment insurance. The latter exists to alleviate the economic distress enforced idleness imposes on persons able to work. Its administration is totally unrelated to the administration of sick benefits. As Governor Lehman explained in his veto message "The control and investigation of claims for such benefits would require differently trained personnel. The whole organizational structure of the Division of Placement and Unemployment Insurance would have to be changed."

Organized medicine has frequently pointed out that obligatory prepayment for sickness is far more complicated than any other form of social insurance. It is simple to establish such clear-cut facts as unemployment and old age. Determination of the existence and severity of an alleged illness is a far more difficult thing. Certainly it is no task for lay administrators without medical knowledge or experience.

Governor Lehman expresses the considered point of view of both friends and enemies of compulsory health insurance when he observes that it "should not be injected in haphazard fashion into the unemployment insurance system which was created for an entirely different purpose." The issue of compulsory health insurance is an extremely important one, with ramifications extending to the nation's political structure as well as health. It should not be decided without thorough investigation and thoughtful consideration.

An attempt, like the Goldberg bill's, to foist health insurance upon this state by subterfuge, implies doubt in the minds of its sponsors as to the merits or acceptability of the system they urge. Governor Lehman has done well to refuse to be party to such a move.

## Fact vs Propaganda

At the present time there are at least three measures pending in the Senate Committee on Labor and Education which would impose an enormous financial burden on the nation without producing commensurate benefits in health. In fact they would probably make matters worse. All three—the Wagner National Health Bill, the Lodge Health Bill, and the Capper National Health Insurance Bill—appeal for support on the basis of the deplorable conditions alleged to have been uncovered by the Administration's National Health Survey.

Congress should read the *Industrial Bulletin* for April 6 before permitting itself to be frightened into voting millions for these dubious health schemes. The State Labor Department's report on the prevalence of syphilis in industry illustrates the difference between surveys designed to obtain facts and surveys intended for propaganda purposes. Investigation of four industries reveals "a far lower percentage of syphilitic workers than is commonly supposed," according to Commissioner Frieda S. Miller. In contrast to the 10 per cent usually assumed to be infected in any unselected group, only 1 per cent of approximately 700 workers gave evidence of disease. This is considerably less than the 5 per cent incidence alleged by the American Social Hygiene Association. It bears out Dr. S. Adolphus Knopf's charge that the statistics published by certain organizations are inaccurate and present a false picture.

No one will begrudge the money spent to combat venereal disease in recent years. Nevertheless we may question whether it is wise to base health measures on fear fostered by exaggerated morbidity figures. If the reform-by-fear movement persists, government effort will be directed not where it is needed most but toward the biggest scares. Whoever can paint the most terrifying picture will get the biggest appropriations.

There is no doubt that this is the method employed by advocates of state-managed medicine. The National Health Survey is unreliable as a source of authentic information. Its sponsors have never refuted the criticisms directed against it. It is primarily an instrument of propaganda, designed to frighten the public into accepting a costly, politically controlled system of medical care.

Congress is less likely to be fooled by the phony facts therein if it compares the demonstrated rate of syphilitic infection, as revealed in the State Labor Department's studies, with the far higher figures adduced by interested propagandists. This discrepancy corroborates organized medicine's charge that many of the so-called surveys which are used to discredit the existing system of medical care are either "rigged" or conducted with a disregard of scientific methods.

## A Poser for Pediatricians

There is a considerable amount of speculation among pediatricians concerning the manner in which convalescent serum and parental blood can be employed to the best advantage. Of course, their early use in instances of known contacts will most frequently avoid contagion in susceptible individuals. To cite but one instance, in Kutscher's<sup>1</sup> report of the prevention of a mumps epidemic in a boys' camp, wherein 51 children were exposed to a case of mumps, the convalescent serum obtained from those who had had the disease, even as far back as ten years previously, succeeded in obviating the spread to all but one. Other reports in the literature testify to the adequacy of these measures in the prevention of measles and scarlatina.

The speculation that we allude to is whether or not to employ convalescent serums and parental blood as routine measures for all children admitted to a hospital ward. At present, despite the precautions taken in all hospitals to examine for contagious disease prior to admission and then to place the child in isolation for at least forty-eight hours, the exanthems crop up in every pediatric service all too often. Such occurrences usually call for quarantine and a curtailment of hospital service for new applicants, besides exposing the incumbents to an additional infection. Whatever is being done now—physical examination, cultures of the nose and throat, and finally isolation when once admitted—has not been sufficient to protect the hospital and its in-patient children against these episodes.

It is definitely established that a transient, passive immunity against these diseases can be conferred on a child by the injection of either convalescent serum or blood taken from one of its parents. Might it not be feasible to incorporate this procedure in the system of prophylaxis commonly in use in the admission of patients to the children's wards? It is conceivable that by this means not only may unsuspected cases of contagion be aborted but susceptibles may be immunized for the period of their stay in the hospital. If this conjecture can be proved factual, an impressive saving in health and administrative expense will follow. It is a thought well worth the serious consideration of pediatricians and epidemiologists.

## Crymotherapy

The use of physical agents in the treatment of malignant growths dates to the discovery of radium and the roentgen ray. After nearly two decades of carefully controlled experimentation and ob-

<sup>1</sup> Kutscher G W. J. *Pediat.* 16 166 (Feb) 1940



servations, these two finally were deemed effective in the control of cancer. Now a third has been added in the form of cryotherapy, more commonly known as human refrigeration. It has been widely commented upon in the lay press but the wording of some of the articles which have appeared may have given the impression that a "cancer cure" has been discovered.

This is far from the fact and no one is more emphatic about it than Fay<sup>1</sup> who investigated the effect of refrigeration on cancer for eight years. Thus far he states that the only conclusions he can draw from the work are that this form of treatment gives prompt relief of pain and removes the necessity of administering narcotics. There is no evidence as yet at hand to indicate that refrigeration is curative.

There are many problems which this work will present. One of them is how to obtain a low enough temperature in the growth without producing damage in the other organs of the body. It is known that a temperature of 60 F. will result in a progressive destruction of some types of tumors. The lowest, however, that the body as a whole can possibly stand for any length of time is somewhere between 70 F. and 75 F. Whether the present regimen of three to six periods of refrigeration lasting in duration from three to four days each will be changed, remains for the future research in this field to answer.

Physicians are bound to be queried by their patients concerning this new therapy for cancer and they must be prepared to give information that will set aright the garbled or misleading accounts which they may have read or been told about. The work is too important to be spoiled by undue publicity before much more is learned about it.

<sup>1</sup> Fay, T. *Quart. Review* (Jan.) 1940

## Current Comment

"The physician who wants his son to succeed him is faced with the expense of a very expensive education over a ten-year period following high-school graduation. At some time during this period the handwriting on the wall indicates that the practice of medicine will be socialized. Thus, the reward for the father's financial burden and the son's long years of study will be the privilege of a political job, subject to political dictation, and with paltry remuneration.

"Not a very pretty picture, is it? How

many physician-fathers will want it for their sons? It is true that a physician's greatest reward is the privilege of service and many hardy souls will move heaven and earth to secure this privilege regardless of its discouraging outlook, but many others who might have become great healers will be frightened off. There is an old bromide that it is darkest before the dawn. Let us pray that dawn is about to break"—F. C. S., writing on "What Shall We Do for Our Sons?" in the April issue of *The Medical World*.

## Dr Charles Stover

**D**R. CHARLES STOVER, past-president of the Medical Society of the State of New York, died at his home in Amsterdam, New York, April 9, 1940. In his death the medical profession has lost one of the most outstanding of members, the city of Amsterdam a loyal, civic-minded, and progressive citizen, and his friends and associates a kindly, lovable, and humane man. Dr Stover was born at Cobleskill, New York, February 28, 1851. He was the son of a minister, prepared for college at Seneca Falls Academy and after one year at the Albany Medical College entered the University of Pennsylvania and was graduated with the class of 1880. He began the practice of medicine the same year in Amsterdam and continued until his death. Never a robust man, he conserved his strength for the large and dependent practice he commanded. His habits were very regular, but he was always ready to answer the call of the sick.

His life was one of intense activity in his chosen profession. Careful, painstaking, very discreet, and deliberate, his art and skill were so blended with a systematized science that they became working rules which, to his collective clientele, yielded most satisfactory results. In his civic relations, his long career was marked by many incidents showing his public spirit and love for his city and county. The Chamber of Commerce, Montgomery Sanatorium, County Historical Society, Amsterdam Board of Trade, to say nothing of his sincere interest in tuberculosis and health activities and the Amsterdam Hospital, all had the benefit of his advice, his wise counsel, and active cooperation during his long and fruitful life.

Dr Stover was always a physician and good citizen but above all a gentleman and loyal friend. He had his standards for charity, sincerity, and human kindness, and always lived up to these established standards. He continued his interest in the State Medical Society throughout the years, and his gentle, kindly smile and ready handclasp will be a sincere loss to many friends who mourn his death.

## Dr. Thomas P Farmer

**D**R. THOMAS P FARMER served the Medical Society of the State of New York in many capacities from 1927 until his death on April 12, 1940

He was a delegate from the Onondaga County Medical Society to the State Society from 1927 to 1931 He was chairman of the Committee on Public Health and Medical Education of the Medical Society of the State of New York continuously from 1927 He was a member of the Council of the Medical Society of the State of New York for the same length of time He served as a delegate to the American Medical Association from 1933 In 1937 he was chairman of the Section on Public Health and Sanitation and he served on a Special Committee to confer with the State Hospital Association

To the medical societies, as to each of the varied activities to which he devoted his time, he gave intelligent interest born of natural talent, preparation, and experience. Educated in the schools of Syracuse he entered Syracuse University and was graduated from the College of Medicine in 1906 After serving internship and residency at St Mary's Hospital, Brooklyn, and as junior attending physician at the Hudson River State Hospital at Poughkeepsie, he returned to Syracuse where he began private practice specializing in gynecology Early in his medical career he became interested in radium for treatment of malignancy and he worked selflessly for the control of cancer

His alma mater gave him appointments as instructor, assistant professor, associate professor, and professor of clinical gynecology

He served on the staffs of St Joseph's Syracuse Memorial, University, and Syracuse Psychopathic hospitals and the Syracuse Free Dispensary

His numerous publications have dealt largely with radium therapy and public health

From 1922 to 1926 he was Commissioner of Health of the City of Syracuse.

During the World War he was a member of the District Examining Board

He had been president of the Onondaga County Medical Society, of the Syracuse Academy of Medicine, the staffs of Syracuse Memorial and St. Joseph's hospitals, and of the Alumni Association of the College of Medicine of Syracuse University He was instrumental in developing the pneumonia control program in New York State and was a member of the Advisory Committee on Pneumonia Control of the State Department of Health He gave much attention to the cancer control program of New York State and was a member of the Advisory Committee on Cancer Control of the State Department of Health He was a director of the New York State Committee of the American Society for the Control of Cancer

Always deeply interested in postgraduate medical education his leadership was widely recognized He was vice-chairman of the Associated Postgraduate Committee. He also was on the State Legislative Commission to formulate a long range health program

In recognition of his long devotion to public health he was chosen by Mayor La Guardia in 1935 to represent the Medical Society of the State of New York in a study of Scandinavian and British methods for the control of syphilis and gonorrhea

In 1939 he became chairman of the Syracuse Housing Authority, having long served on that commission He attended the dedication of "Pioneer Homes" in January, 1940

He was vice-president of the Onondaga Health Association, a member of Catholic Charities, Inc., of the Advisory Board of Catholic Welfare Syracuse Diocese, and a director of St Thomas More Foundation at Syracuse University

The many qualities which made a fine character, a good citizen, and a fearless yet tactful leader were possessed and developed by Tom Farmer A selflessness that was both inspiration and fulfillment won him countless friends From his home, his city, his university, his state, his country, his influence radiated Not least among his virtues was his haste to be kind To the affairs of everyday life he demonstrated in practical application his awareness of the Divine upon this earth

His contributions to science were worthy, his services to medical societies, official, and voluntary health agencies and civic enterprises were amazing To his friends, his patients, and intimates the memory of Dr Thomas P Farmer will ever be sacred

## BILIARY DUCT STONES

PERRY VAYO, M D , and LEO F SIMPSON, M.D , F A C S , Rochester, New York

THE wide occurrence of gallbladder disease in people of middle age is understood by all physicians. It is an everyday problem. Autopsy observations make it appear to be one of the most frequent disorders. Hektoen and Riesman found stones in 25 per cent of cadavers coming to autopsy after the sixteenth year. Mentzer in 633 consecutive necropsies at the Mayo Clinic found 21.67 per cent of adults had stones. Crump in 1,000 routine consecutive post-mortem examinations found stones in 32.5 per cent. The fact that these people with gallbladder dysfunction are in the most useful period of life when the disability manifests itself challenges us to evolve the most effective and safest treatment for these disorders. The medical and surgical treatment has been far from satisfactory, and recent discoveries that throw some light on the situation are of commanding interest.

This article is concerned with the incidence, diagnostic features, and treatment of stones in the common and hepatic ducts, for there is a gradual realization that the explanation of the poor results is to be found there—in overlooked stones that remain to cause recurrent symptoms after the gallbladder has been removed. In a smaller degree, duct stones have remained to cause symptoms even after the ducts have been explored and drained in addition to cholecystectomy. Jung found 16.4 per cent of stones left post-operatively in his necropsy material. Bernhard, reporting results of 750 choledochostomies followed at Giesen Clinic, found "at least 5 per cent of stones overlooked in the choledochus." Wm. Mayo stated "In nearly  $\frac{1}{3}$  of the deaths following operation for common duct stones in our series, post-mortem revealed that all stones had not been removed." Crump found calculi in the ducts in 24 per cent of all gall-

bladder disease with stones in 1,000 consecutive necropsies. These were located in the hepatic ducts in 28 per cent of the cases, common duct 30 per cent, papilla of Vater 60 per cent, and cystic duct 48.7 per cent. The presence of multiple stones, of course, explains the totality of the above percentages.

The operative recovery of stones reported does not approach the autopsy incidence even where the ducts are explored most frequently. Lahey reports 18.9 per cent recovered duct stones in gallbladder operations of 1935, when 44 per cent of ducts were explored, and 21 per cent in 1932-1933 and 1930-1931. These are the highest percentages from this clinic's statistics for the years 1910 to 1935 and the highest recoveries reported in the literature. Allen reports 14 per cent in 1934 and 14.6 per cent in 1933 in biliary tract operations at the Massachusetts General Hospital. Judd and Marshall recovered duct stones in 13.2 per cent of all biliary tract operations in the statistics reported in 1931. The wide disparity between stones discovered surgically and the 24 per cent incidence of a large series of consecutive autopsies would appear to show a failure of treatment in even the best clinics in the recent past. However, the fact that bile ducts frequently harbor stones and must be explored in about half the operations on the biliary tract is being realized more and more.

The signs and symptoms of duct stones most commonly found are pain, jaundice, persisting or recurrent symptoms after biliary surgery, chills and fever following upper abdominal pain, severe nausea and vomiting accompanied by typical pain. The operative findings of first, palpable stone, second, dilated common duct, third, dilated cystic duct, fourth, small stones in gallbladder, fifth, contracted gallbladder, sixth, gallbladder

without stones, seventh, thickened head of pancreas, and eighth, cholangitis are also signs of duct stones

Considering first the preoperative symptoms and signs, we find colicky pain as the most common Judd reports its presence in 80 per cent of the histories of 1,608 patients Lahey also reports 80 per cent right upper quadrant pain in a series of 221 cases The pain is severe and usually requires morphine for relief It is intermittent and may be epigastric instead of in the right upper quadrant and may be dull, boring, or described as an ache rather than the usual colic It is often referred to the back but not necessarily so There is some tendency for it to be nocturnal in people who eat their main meal in the evening In about 20 per cent, pain is absent entirely

Jaundice is present in 61 per cent (Lahey) to 73.4 per cent (Judd) of examinations or histories It is of a fluctuating depth and less intense than the steadily deepening jaundice of malignant or cicatricial obstruction, which, without fluctuation, in degree eventuates in a deeply bronzed or greenish color However, obstructive jaundice cases come to operation earlier than they formerly did, and the fact that the jaundice is not observed in as leisurely a manner has resulted in the pleasing discovery of a large duct stone in some of the cases of deep jaundice and has enabled the surgeon to bring about a cure through its removal Liver damage accompanies these cases and makes waiting hazardous, and the tendency to operate and explore as soon as the patient can be made ready has become the usual procedure The jaundice of cholangitis is about midway between the fluctuating color caused by a duct stone and the persistent deepening type in malignancy of pancreas or papilla

Laboratory studies are of some value, particularly in ascertaining whether jaundice is obstructive or hemolytic in type, but they cannot be more than suggestive or confirmatory in the differential diagnosis of obstruction It is important to

know whether or not any bile is entering the duodenum, and duodenal drainage with a nasal tube tells us that The microscopic examination of bile recovered may show calcium-bilirubin or cholesterol crystals, which are strong evidences of duct calculi Wilkinson has stated that duodenal drainage offers the only available method of establishing a diagnosis in cases where the gallbladder has been previously removed However valuable the sign of jaundice may be, it is actually a somewhat late observation and its presence testifies to a degree of liver damage and disordered blood-coagulation mechanism These factors are bound to be reflected in the surgical mortality rate.

As a subdivision under jaundice, a sign that has been fairly frequent in our experience and when present becomes almost pathognomonic for duct calculus should be described It has not been mentioned in the literature, although it seems unbelievable that it has not been observed by others It is the transient appearance of bile in the urine without visible jaundice The urine is orange or coffee colored and gives the usual evidence of bile pigment when shaken into a foam This sign is apt to be present in one voiding and absent in the next, or it may persist for several hours It precedes clinical jaundice by days or weeks and for that reason is valuable in enabling one to make a diagnosis before liver damage occurs It must be sought for routinely in all cases of upper abdominal discomfort, and patients must be instructed to look for it and, if found, collect a specimen of the suspected urine for examination Sometimes it is made evident to the patient by a urine stain on the underwear The value of this sign lies in the fact that it is earlier than jaundice and also more specific A fairly large amount of bile absorption must occur before jaundice is apparent, whereas a short blockade of the common duct by a stone, which shifts its position perhaps and by so doing completely blocks the duct, is immediately followed by distention of the biliary tree with absorption of pigment by the liver parenchyma and from

the liver by the blood serum, which carries it to the kidneys for elimination. This occurs in a matter of an hour or two, during which time the patient is experiencing the other symptoms of common duct obstruction—pain, nausea, and vomiting in greater or less degree. The whole process may abruptly cease by the moving of the stone or a slight turning of it that enables the bile to pass again and escape from the papilla into the duodenum. Perhaps these movements are initiated by peristalsis and antiperistalsis in the gastrointestinal tract. If the duration of blockade is short, the reverse process soon begins to rid the serum of bile pigments, and visible jaundice does not occur in conjunctiva or skin. It is the same process that, with a larger stone more completely held by the duct, continues until the usual fluctuating jaundice of stone obstruction eventuates. It seems probable that small stones or crystals originating in the gallbladder or hepatic ducts float about in the common duct bile with a gradual accretion of new crystals adding to their volume. When a size sufficient to block the biliary current has been reached, the above sequence takes place. The stones recovered from the ducts in such cases have invariably been small and soft, which makes one feel that they are of fairly recent construction. The following extracts from case records illustrate this sign.

### Case Reports

*Case 1*—S P, September 21, 1938, woman, aged 69, had a history of right upper quadrant pain and tenderness at intervals for a year that was usually accompanied by nausea and vomiting. There was no history of jaundice. The present attack began thirty-six hours before admission, with pain, nausea, and vomiting. Coffee-colored urine was passed on two successive voidings with attack. The third voiding had a normal appearance and remained so. On admission the sclera was slightly icteric.

On first day after admission urine contained bile. Icterus index was 8. Second day jaundice of sclera and skin noted, feces contained bile. Fourth day jaundice deeper, clay-colored stools, pain subsiding. Fifth day

enema returned with dark blood and bile. Sixth day jaundice disappearing, no pain, progress note states "believe patient has passed common duct stone spontaneously." Feces was not examined. Convalescence was uneventful. Discharged 11th day (10/2/38).

She was readmitted November 12, 1938. Health good with no attack from discharge date to November 11, 1938. While patient was teaching, sudden epigastric pain occurred lasting a few moments and subsiding. There was profuse perspiration and weakness followed. In a half hour patient resumed teaching without further symptoms. Urine appeared normal. On day of admission there was a similar attack of epigastric pain with nausea and vomiting which lasted about ten minutes. Patient then felt well for about three hours after which an attack recurred lasting only a few minutes. Physician sent patient to hospital. There was no jaundice and sclera was clear. On admission voided orange-red urine. On following day icterus index was 12.5. Several attacks of pain, nausea, and vomiting occurred during next two days. There was no jaundice. Operation was performed fourth day. Gallbladder was adherent to duodenum and was filled with small faceted stones. Common duct was enlarged and contained seven small soft stones and debris. Convalescence was uneventful.

*Case 2*—M R, May 28, 1935, married female, aged 67. Current complaint was soreness in right upper quadrant referred to right and left angles of scapula which had begun two days before. There was no colic. Dark urine was noted day before admission—succeeding light. Not jaundiced and sclera was clear. On admission right upper quadrant was tender with no pain. The sclera was subicteric but not jaundiced. Icterus, index 8. Urine was dark and contained bile. On the second day jaundice was noted, and the stools were clay colored. These remained more or less jaundiced with urine amber to orange. There was some clay- and some bile-colored feces. She was operated upon on the eighth day. Gallbladder was large and fatty and contained no stones. Common duct was enlarged, containing many large and small soft stones. Hepatic ducts contained several small soft stones.

*Case 3*—W B, January 3, 1932, male, aged 56. Had a history of flatulence and upper abdominal distress at intervals for about a year. Symptoms occurred usually in the evening or after retiring and consisted of a "heavy feeling" in the epigastrium, not referred, and some nausea. Pain was denied. On one occasion the attack was terminated by induced vomiting. Current

complaint was aching in epigastrium with nausea and vomiting, with the onset about four hours after the evening meal, and was more severe than any previous one. Physician saw patient about an hour later. While there, patient voided orange urine (which was saved) containing bile. Morphine sulfate ( $\frac{1}{4}$  gr) was given hypodermically and glyceryl trinitrate (1/100 gr) under the tongue. The following day the patient felt well. No jaundice was visible. Urine contained no bile. He refused further attention and went back to business.

Four months later the attack recurred. He had epigastric aching, not referred, accompanied by nausea and vomiting. He entered hospital where sclera became icteric, urine dark, and stools clay colored. Exploration of common duct revealed four small soft stones, gallbladder contained many small stones.

It seems obvious, therefore, that an earlier sign than jaundice should be valuable to the surgeon in enabling him to make an earlier diagnosis and to remove the obstructing calculus before serious injury to the liver has occurred. When early treatment is possible, the mortality rate may be expected to decline, and residual liver damage will be reduced to a minimum. Furthermore, a larger number of common duct stones that have previously been overlooked should be discovered. In the light of our experience with the above group, it is interesting to consider the large percentage of duct stones that have been recovered in cases where the history is negative for jaundice and in clinics where explorations have been routinely done. It would seem likely that many of these cases never jaundiced should have presented this sign. This sequence can conceivably be produced only by small stones, mucous plugs or blood clots, or small parasites. A fragment of neoplasm would probably be overshadowed by its parent growth pressure on the duct or liver radicles. In the diagnosis of duct stones, we have come to rely upon it and have not failed to recover stones in any instance where it appeared.

Persistent or recurring symptoms after gallbladder surgery suggest overlooked duct stones. This is true even where ducts have been explored at the original

operation, for there is no guarantee at present that no stone remains. Where cholecystectomy or cholecystostomy alone was the initial procedure, the persisting symptoms, especially when jaundice is one of them, make duct obstruction from stone, angulation, or edema and inflammation about the terminal portion most likely. Cholangiography should help us to avoid this situation where the duct has been explored. Enough cases have been reported by Best and others to make it seem probable that small stones frequently lurk in the intrahepatic ducts where they cannot be reached by our present technique, and later these stones are washed down into the larger ducts by the current of bile.

Chills and fever are present in a fair number of common duct stones. Judd reports 37 per cent in his series. Zollinger reports 15 per cent incidence in 100 cases. Lahey had only 4.2 per cent occurrence. This is a symptom associated with long-standing disease of the ducts and seldom occurs where explorations are done frequently. Lahey says "One can, we believe, properly assume that a considerable number of patients in whom unsuspected stones were removed from the common duct at the time of cholecystectomy could have been saved from the dangers and difficulties associated with later deep jaundice and associated cholangitis."

Nausea and spontaneous vomiting occur often in common duct stones. When associated with upper abdominal colic, it is suggestive of duct distention. Zollinger found that a collapsible balloon inserted in the common duct under light anesthesia and inflated later would cause nausea and vomiting, whereas distention of the gallbladder did not. Frequently, it is an early symptom although it also appears when the ducts are inflamed or when the duodenum is irritated. He found an incidence of 89 per cent involuntary vomiting in common duct stones in 100 cases of the Peter Bent Brigham Hospital. However, it was present in 85 per cent of acute chole-

cystitis and was believed to be due to cystic duct obstruction commonly accompanying it.

In addition to the preoperative signs and symptoms, certain findings at operation suggest the presence of duct calculi. Of course, a palpable stone or stones in the duct necessitates exploration. Palpation is valuable if the findings are positive, but it is well known that stones in the pancreatic portion of the duct are often impossible to feel, particularly when the pancreas is indurated. The best method of palpation is done from the left side of the patient with the operator facing the head of the table. The left hand is inserted with the fingers beneath the hepatoduodenal fold and the thumb on top of it. By slipping the thumb over the course of the duct, the structure can be followed to the pancreas. However, if the findings are negative but the cystic duct is dilated, the supposition is that it dilated because of the presence or passage of a stone or from back pressure in the system above the sphincter of Oddi. On the other hand, a fibrosed contracted duct is the result of old inflammatory changes usually associated with the formation and passage of calculi.

A dilated common duct makes exploration mandatory. In cases not previously operated upon, the dilation is caused by a stone in the terminal portion, or by inflammatory or neoplastic change in the head of the pancreas, or rarely by a spasm of the sphincter or carcinoma originating in the duct itself. In secondary operations, inflammatory reaction or scar tissue may angulate the duct and cause it to dilate.

The presence of small stones in the gallbladder arouses suspicion of duct stones because of the greater ease with which they may be extruded. Also the concomitant formation in the ducts appears to be possible.

A small contracted gallbladder with or without stones suggests the necessity of duct exploration. It is the evidence of an old process which is apt to extend to the ducts as time passes. The contracted miniature is the end result of an organ

once large and infected, with small stones probably expressed into the ducts or more often remaining in its quiet interior.

The presence of an indurated pancreas that has not the hardness of a neoplasm brings up the question of a stone at the ampulla with biliary reflux into the pancreatic duct. This necessitates exploration.

Cholangitis with an irregular thickening of the duct demands a search and a cleaning of the duct of stones and debris. In advanced cases the contractions may make probing hazardous or impossible, and the judgment of the surgeon may be taxed to the utmost to decide whether retrograde dilation should be done or an anastomosing operation attempted.

Finally, if the bile, aspirated with syringe from the common duct, is cloudy and contains flocculent material, the duct should be explored.

The treatment of common duct stones is entirely surgical, and operation is best done as soon as a diagnosis is made and a brief period of supportive therapy has been completed. This is much less extensive if no jaundice is present than would be required in a case that is frankly jaundiced, and it can usually be finished in two or three days. Our usual procedure is to have the patient placed on a high carbohydrate diet with plentiful fluids, and one or two intravenous clyses of 1,000 cc of 5 per cent glucose are given daily. In many, a tonic dose of digitalis may be of value and certainly does no harm during the preoperative period. During this interval, kidney function should be estimated, and blood studies should be done including prothrombin level and bleeding and coagulation time, especially in those patients who are jaundiced or have an increase in the icterus index. Vitamin K (administered by duodenal tube because of its nauseating character) and transfusions will bring the clotting process within safe limits in these people and will eliminate the hazards of prothrombin deficiencies. One definite rule for postponement has



been the presence of respiratory infection or even moderate acuteness. The great tendency for shallow respiration in people with upper abdominal incisions seems to invite respiratory infections, and a large incidence of right lower lobe lesions complicates operative measures on the biliary tract. Coughing postoperatively is extremely uncomfortable and is apt to favor the incisional hernia occurring so frequently in right upper quadrant incisions.

The anesthetic we use may be spinal or nitrous-oxide-ether. We do not use avertin because of the hazard to a damaged liver. Spinal gives a complete relaxation which is pleasing to work under, and we use it especially where the patient has a thick abdominal wall or is heavily muscled. Nitrous oxide ether is used in 50 per cent of the cases and has been entirely satisfactory. The depression and liver insult of a prolonged deep ether anesthesia should be avoided.

The high right rectus incision gives good exposure of the gallbladder and common duct. It must be long and is made about 1 cm laterally to the midline. The rectus sheath is opened and the muscle split, avoiding as far as possible the tendency to cleavage in a plane too lateral so that the nerve supply will not be greatly impaired. The muscle is retracted somewhat, and the transversus fibers and peritoneum are opened in the same plane, the incision being extended as far as necessary.

The gallbladder is now identified and palpated, and the liver, pancreas, duodenum, and stomach examined. The gallbladder is grasped with a Kelly clamp, and a hand is passed over the dome of the liver admitting some air and making mobilization easier. Careful traction on the gallbladder now brings it closer to the incision and adhesions to the duodenum are dissected away. The intestine is displaced to the left with one or two large packs and a broad Deaver retractor placed to hold it there. A second Kelly is placed farther along the fundus and traction causes the cystic duct and the hepatoduodenal fold to

stand out prominently. The gallbladder is now carefully palpated and examined, and if it is too tense to stand traction safely, it may be aspirated at this time. While maintaining some traction on the lower clamp with the left hand, the fatty and areolar tissue about the cystic and common duct is bluntly dissected with hemostat and gauze until the ducts can be well visualized. At this point, the operator may change to the left side of the table to palpate the common duct between the fingers and thumb of the left hand. It is unnecessary to say that the relationship of common duct, portal vein, and hepatic artery is sometimes anomalous and that any blind incision or clamping in this area may be disastrous. The cystic and common ducts must be plainly seen and their relationship identified. Usually some fine blood vessels are torn in the areolar tissue of the hepatoduodenal fold while acquiring exposure of the common duct, and they require ligation to avoid persistent oozing. A Luer syringe with a "20" gage needle is now introduced, and the common duct is aspirated. Deaver and Lahey have called attention to the necessity of needle aspiration in every case in order to avoid the tragedy of incising an overlying portal vein, which occasionally is found in front instead of behind the duct. Also the information gained by holding the bile-filled syringe to the light is very helpful in deciding whether or not the duct should be incised. When stones are present the bile shows flakes and cloudy material, which are normally absent. If it is decided not to explore the duct, the needle hole will close with very little leakage.

If the duct is to be explored, it is now grasped with two Allison forceps, and a longitudinal incision 1 cm in length is made with a sharp bistoury. It is well to make this at least slightly distal to the junction with the cystic duct for convenience in exploring the ampulla of Vater. A suction tip removes the bile as it escapes from the incision, and duct forceps are carefully introduced first toward the ampulla. If an obstruction

is reached, the greatest care should be exercised in attempting to get by it, for a false passage may be made if any force is used. When stones are felt, the forcep is partly closed and withdrawn. Scoops may then be introduced, and if the operator returns to the left side of the table, the scoop can be manipulated with the right hand, while the left, with finger below and thumb above the duct, guides it and milks the stone into the concavity of the instrument. Sometimes a curved Kelly clamp follows the course of the duct more easily than any other instrument and is extremely useful for bringing forth small stones. When the distal portion of the duct appears to be clean, the hepatic ducts are explored in the same manner. A catheter is now attached to a 20-cc. syringe, filled with sterile water, and introduced first distally about an inch and the duct washed out. Sometimes fragmented stones and gravel appear at the incision with the returned washings, suggesting that the duct is still obstructed and making further instrumentation advisable. When the water injected disappears into the duodenum, the duct is considered clear, and the catheter may be withdrawn and reintroduced proximally and the hepatic ducts flushed. The sphincter of Oddi is now dilated with graduated Bakés dilators. This is a most important maneuver, because it makes it possible for an overlooked stone (or stones that may subsequently wash down from the intrahepatic ducts) to be passed into the duodenum. There is a characteristic sensation felt when the olive-shaped dilator slips through the sphincter. It jumps forward as the tip slides through the papilla into the duodenum. Then the dilator is gently withdrawn and a larger size substituted. This is repeated until the sphincter has been dilated to duct size (about 10 mm). The dilatation should be done with the possibility in mind of making a false passage, as Allen has pointed out. If obstruction fails to give way to gentle pressure of the instrument, it is safer to open the duodenum and perform retrograde dilation. Lahey has reported 2

cases of fatal gas *Bacillus cholangitis* following sphincter dilation, and it is understandable that many view this procedure with some misgiving. However, as no other cases have been reported, it may be assumed that ascending infection is of infrequent occurrence. It is also believed that reflux of duodenal contents through the stretched orifice is rare, occurring only when there is some duodenal obstruction causing antiperistalsis. These objections are outweighed by the ever-present possibility of leaving a stone behind to cause recurrent symptoms. Crump's necropsy findings of 28 per cent hepatic duct location in stone cases must be remembered. There is no way, at present, to avoid an occasional instance of this, and therefore it seems most important to leave a means of exit into the duodenum. Best has reported a case with negative cholangiogram at six days but with persistent sinus-draining bile. Ten weeks later a second cholangiogram showed two stones in the common duct. After two months of nonoperative management, a cholangiogram showed the absence of stones, and the T tube was removed and uneventful convalescence ensued. It seems probable that undiscovered stones come principally from two areas—the pancreatic portion and the hepatic ducts. The latter apparently are washed down into the common duct when the bile current is re-established after the common duct has been cleaned of impediment. As has been repeatedly stated, the stone in the pancreatic portion is frequently overlooked. The inflammatory reaction about it may cause the surgeon who palpates it to believe he is dealing with a malignancy. Even when the duct is carefully probed and scooped, flushed out, and suction used, a stone may be passed by unnoted. With the sphincter dilated, it is probable that the exceedingly dangerous and difficult secondary operation may be avoided and the stone passed by nonoperative measures.

A T tube with the short arms cut to  $1\frac{1}{2}$  cm can now be inserted in the duct without difficulty. It seems un-

necessary to have the arms longer than that, as it will remain *in situ* indefinitely with reasonable care in avoiding traction on the long arm. It certainly is more securely placed than a catheter and is no more difficult to insert. It has the advantage of not obstructing the duct lumen when the long arm is clamped to force the bile into the duodenum. It is held in place by a fine chromic interrupted suture through the incised edges of the duct on either side of the long arm. A suture or two is used to draw the areolar tissue of the hepaticoduodenal fold over the exposed portion of the duct.

The gallbladder is now removed from below upward, leaving enough of the peritoneal coat to cover the raw liver area when approximated with a running stitch. The gallbladder is emptied and drained in cases where an anastomosis between gallbladder and stomach or duodenum is indicated or where the patient's condition or age makes further operative procedure hazardous. In such cases, the immediate goal has been achieved by removing the duct obstruction, cholecystectomy may be deferred until the patient's condition permits. In very elderly people, the life expectancy may be too short for the formation of added stones. A very small catheter will be satisfactory for drainage of the gallbladder, and it could probably be dispensed with and the opening closed tight when a drain is already in the common duct. The gallbladder catheter drains scarcely at all and, aside from the decompressing effect, seems to be quite superfluous. A cigarette drain is placed in the foramen of Winslow and a stab wound made laterally beneath the twelfth rib through which the drains emerge. The omentum is placed over the duodenum, and the incision is closed.

The T tube usually drains freely for the first three to five days, the period of swelling of the duct due to trauma of exploration. At the end of this time the swelling and edema recede and allow a large portion of bile to pass directly through the short arms and into the duodenum. This is highly desirable, and

its early occurrence promises a short and satisfactory convalescence. About the ninth day the cigarette drain is removed, and the T tube is clamped periodically to test the patency of the common duct. A moderate discomfort when the duct is first distended need not cause alarm, but if persistent pain occurs after a day or two, cholangiogram should be done. Twenty cc of 48 per cent hippuran solution as described by Best is injected through the long arm, and an x-ray of the biliary tract is taken. In the event of obstruction the tree pattern becomes blunted, and little or no hippuran enters the duodenum. Overlooked stones usually appear as gaps in the course of the duct. In this event the biliary flush as described by Best is instituted. It consists of the administration of 3 to 5 tablets ( $3\frac{1}{4}$  gr) of dehydrocholic acid every four hours to increase the secretory pressure within the biliary ducts. These are given orally. At the same time a three-day regimen is begun. On the first day a 1/100 gr tablet of nitroglycerin or glyceryl trinitrate is placed under the tongue morning, noon, and night. On the second day a hypodermic of atropine sulfate (1/100 gr) is substituted for the nitrate three times. On the third day the nitroglycerin or glyceryl trinitrate is repeated as on the first day. The common duct is gently irrigated once daily with physiologic saline solution through the T tube, and the tube is allowed to drain for five minutes, after which 10 to 30 cc of warm sterile olive oil or liodol is instilled. After thirty minutes the tube is clamped. Each morning the patient is given 2 dr of magnesium sulfate solution and each evening an ounce of olive oil or thick cream by mouth. This treatment may be repeated after a few days rest period if repeated cholangiogram still shows a stone.

The Pribram operation for fractionating the remaining stone has been widely used, and many successful attempts have been reported by Walters, Wesson, *et al*. In this, a 5 cc mixture of alcohol-ether (1 to 2 parts) is injected through the tube

to increase the intraductal pressure, fragment the stone, and push the fragments through the sphincter. It cannot be repeated more than a few times, however, without insult to the liver parenchyma with accompanying decrease in bile secretion. Many stones have a layer of calcium about them which is impervious to ether, and in these, failure will result.

When the remaining stone lies above the T tube, the tube, of course, must be withdrawn at least far enough to remove the short arms from the common duct. It is well to delay this until the fistulous tract has been well established, a matter of about two weeks. In this type of case the Best technic appears to be less irritating, as the injection of alcohol-ether mixture is not without distress to the patient anyhow, and its injection through a fistulous tract becomes especially disagreeable.

Fortunately, this distressing situation is rare. In the vast majority of cases, clamping the tube causes little or no discomfort, and it is gradually clamped continuously. About the twelfth day the tube is removed with a steady, gentle pull, which causes very little discomfort to the patient. The fistulous tract closes quickly with surprisingly scant bile drainage on the dressings.

Three thousand to 5,000 cc of 5 per cent glucose solution is given every twenty-four hours intravenously for the first few days following operation. Then fruit juice and liquids containing sugar are usually tolerated orally in quantities sufficient to replace clyses. Small transfusions are valuable in jaundiced patients with hemorrhagic tendencies, and these supply the vitamin K lack which Snell has described. The patient's diet is not greatly restricted during convalescence. We feel that cooked fats should be restricted and gassy foods avoided. But the effect of cream, butter, and salad oils on the sphincter of Oddi should be remembered, and liberal amounts will be well tolerated. We give bile salts after meals routinely for a month or two until the liver function has been resumed.

The convalescence of common duct stone cases that have been diagnosed before jaundice has occurred or become marked is very rapid. The absence of hemorrhage is one notable feature that can be attributed to earlier diagnosis. The liver function is the most important consideration in the mortality of this condition. In early cases it is still good, and after the obstruction is relieved, regeneration of function occurs immediately.

### Summary

Postmortem statistics show the presence of duct stones in about one-fourth of the cases of disease of the biliary system. The incidence of recovered stones from the bile ducts is much less than that, except in a few clinics where explorations are done routinely in 50 per cent of cases. The percentage of recovery subtracted from 24 per cent (postmortem incidence) indicates a failure in treatment.

The indications and symptoms of duct stones are enumerated, including a sign not mentioned in the literature, also the operative findings that are commonly seen when calculi are present in the ducts are mentioned. Diagnosis before jaundice becomes marked constitutes a desirable accomplishment because of lessened mortality and shorter convalescence.

A technic for exploration of the bile ducts and dilatation of the papilla of Vater is described. Postoperative cholangiograms should be done, either routinely or at least when postoperative course suggests duct obstruction. The Best and Pribram technics for managing remaining duct stones are outlined, together with postoperative care.

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## PNEUMONIA ON ITS WAY OUT

Such great strides have been made in the control of pneumonia mortality through the use of serums and of drugs like sulfapyridine, together with the education of the public to the dangers lurking in colds and various respiratory disorders, that the pneumonia season has lost much of its dread," statisticians of the Metropolitan Life Insurance Company declare.

The pneumonia mortality experience of the insurance company's industrial policyholders for the year from September, 1928, through August, 1929, and the corresponding period in 1938 and 1939 shows the death rate in January—the pneumonia "peak" month—dropped from more than 400 per 100,000 in 1929 to less than 100 per 100,000 in January, 1939

In each of the other months of the "pneumonia season"—December, February, and March—pneumonia mortality reached such low levels, compared with the corresponding months ten years earlier, that its seasonal curve is now comparatively flat

"Certainly the experience of 1938 and 1939 augurs well for the future," the statisticians say. "We have good reason to be optimistic, in the light of the new methods for pneumonia treatment now being rapidly extended to all parts of the country. Just a short time ago serum therapy was used in only a few cities and states. But now the advantages of serum are generally known and applied. Perhaps even greater successes may be expected from the recent advances made in chemotherapy."

## A PRESIDENTIAL CANDIDATE AND THE MEDICAL PROFESSION

When District Attorney Thomas Dewey of New York City visited Salt Lake City recently in his swing around the country to further his presidential nomination aspirations, the committee in charge of his stay in Salt Lake City was kind enough to arrange an interview between Mr. Dewey and representatives of the Utah State Medical Association. The representatives of this association took the opportunity to quiz Mr. Dewey somewhat upon his attitude toward the Wagner Health Bill and some proposed ideas of socialization of medical practice, reports the *Rocky Mountain Medical Journal*. It adds: While the association does not wish to quote Mr. Dewey directly, it feels definitely sure

that his attitude toward the medical profession and the medical profession's feeling in regard to the Wagner Bill as it now stands and other proposed methods of socializing medical practice was eminently satisfactory to the representatives of the medical association.

It is the intention to interview other presidential nomination aspirants who visit Utah in a like manner for two reasons: first, to ascertain where the aspirant stands on governmental interference with medical practice, and second, to impress these aspirants that the medical profession is taking a very vital interest in this respect in the coming presidential campaign.

# INFECTIONS OF THE NECK

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TO INTRODUCE this subject I deem it appropriate to quote some pertinent statements by authors from whom I have freely borrowed in the preparation of this paper

Mosher said "Pus in the neck calls for the surgeon's best judgment, best skill, and often all his courage "

Cutler said "Such cases need the advice and care of the senior members of hospital staffs and should not be delegated to junior assistants "

Barlow said "Pus within the neck calls for the exercise of the utmost skill and judgment based on a sound knowledge of the surgical anatomy of the part "

Carmody said "Poultice until fluctuation occurs and you will incise three days postmortem "

To which I would add that if these cases occurred as frequently as acute appendicitis we would all be able to recognize their dangerous aspects and apply the proper treatment before they "got out of hand "

Barlow, in an investigation of the cervical connective tissue made dissections, serial sections, and injections after the manner of Kanavel and Koch in their investigation of hand infections, and besides confirming the statements of Mosher, Beck, Ford, and others about the parotid, submaxillary, and lateral pharyngeal spaces, added new information as to the probable manner of the development of thrombophlebitis of the internal jugular veins

He described the neck as consisting of four units (1) the vertebral, including the vertebrae and their muscles, (2) the visceral (including thyroid, larynx, trachea and esophagus below and the mouth and pharynx above), (3) great vessels (carotid and jugular), (4) the vaginal (trapezius and sternocleidomastoid mus-

cles and the strong connective tissue between them) These various units are individually held together by connective tissue that penetrates between the component parts and are collectively held together by condensations of connective tissue that we speak of familiarly as fascia, more particularly deep fascia The different units are separated from each other in places where there is movement between units by areolar connective tissue and in places where there is relative rest between units by fatty connective tissue

It is in these particular places that infection may spread or localize, and it is these places with which we should be familiar in order to treat them properly

Fat deposits are found (a) subcutaneously, (b) beneath the vaginal unit, (c) lateral to the pharynx (deep to the parotid gland), (d) around submaxillary gland, (e) in suprasternal notch

Loose areolar tissue is found between the visceral and vertebral units and between the visceral and vaginal units and permits the up-and-down movement of the visceral unit through a range of one-half inch that occurs between it and the other units mentioned This movement of the visceral unit is brought about by the suprahyoid muscles attached above to the base of the skull through the styloid process and its muscles and to the sternum and scapula below by the infrahyoid muscles

The great vessel unit has only expansile motion but does send branches to the visceral unit Since the latter is mobile, the vessels pursue a tortuous course to reach it, thereby producing a "slack" between the two physiologic units

The visceral and great vessel units pass into the thorax and have connective tissue layers between them The condensations of connective tissue are of particular

importance since, by their consistency, they tend to localize infection in spaces or afford planes along which it may travel

The vaginal condensation of connective tissue, which is commonly known as the superficial layer of deep fascia, surrounds the neck like a tube and ensheaths the trapezium and sternomastoid. Below the hyoid and medial to the sternomastoid it is thin and separated from the visceral unit by loose areolar tissue, just above the sternum it splits to form Burns's space, filled with fat. It is firmly attached to the hyoid bone, and above this it passes over the submaxillary gland to gain attachment to the lower border of the mandible. It also firmly covers the parotid but attaches loosely to the zygomatic arch, and above this it covers the temporal muscle and then continues upward and adheres to the temporal ridge. It also passes deep to the parotid, here forming the stylomandibular ligament which intervenes between the parotid and the submaxillary triangle, and then as a more tenuous layer it separates the parotid from the lateral pharyngeal space which is filled with fat.

The vertebral unit is surrounded by a well-marked condensation that penetrates between all of its parts. Posterolaterally it fuses with the vaginal condensation on the deep surface of the trapezium and anteriorly covers the scalenus muscles and brachial plexus, while below it fuses with a condensation about the subclavian vessels forming a roof over the pleural apex.

Between the visceral and vertebral condensation there is an areolar filled space that is converted into a rectangular space by condensations of fascia between the two units that are placed about three-quarters of an inch from the midline and extend from the skull to the thorax. This space (retrovisceral or pervertebral) is constricted at the hyoid level but does reach to the level of the arch of the aorta. In it retropharyngeal infection occurs. The visceral condensation penetrates between all parts of its unit but is quite loose, and the esophagus can easily be separated from the trachea except near

the thyroid gland, whose surrounding fascia is strong.

There are condensations about the infrahyoid muscles, and the omohyoid, as it passes laterally, pulls with it a definite triangular condensation between which condensation and the vaginal unit there is an areolar-filled space, limited above by the omohyoid and below by the origin of the infrahyoid muscles from the sternum and the condensation about the subclavian vessels. The space behind this fan of muscles and condensation passes down to the pericardium through the mediastinum in front of the viscera.

The upper visceral region is shut off from the lower lateral visceral region by the suprahyoid muscles. In this region are found the submaxillary, parotid, and lateral pharyngeal spaces.

The lateral pharyngeal space is filled with fat and deeply placed, being covered laterally by the parotid. This space may be considered the key position in difficult upper cervical suppurations. It is pyramidal in shape with the base nearly one inch square at the base of the skull and the apex at the greater cornu of the hyoid, one and one-half inches below. Laterally the parotid covers it, while the stylomandibular ligament, derived from the parotid fascia, forms part of the boundary and separates the parotid from the submaxillary gland. The internal pterygoid muscles and ascending ramus of the jaw are also part of the lateral wall of the space. Between this wall of the space and pharyngeal wall a probe could easily be pushed into the submaxillary triangle. Its medial wall is the superior constrictor of the pharynx separating the space from the tonsil and the cavity of the pharynx. Posteriorly the space is firmly shut off from the jugular vein and carotid by the styloid apparatus, more particularly the stylopharyngeus muscle, and a very tough condensation of connective tissue called, by Zucker Kandi, the stylopharyngeal aponeurosis. It spreads medially and forward from the styloid and stylopharyngeal muscle to the lateral pharyngeal wall and is a strong barrier between the great vessels and the lateral pharyn-

geal space. The base of the space is formed by the skull and the eustachian tube, and at the apex there is no easy route downward into the neck.

The muscles forming the floor of the submaxillary triangle belong to the visceral unit and have fascial covering, the roof is formed from vaginal condensation of connective tissue. The intervening space is filled with fat containing salivary gland and lymph nodes. The gland also has its own dense capsule from which it is not easily separated, and besides this it has a fascial sheath from which it can be easily shelled. Thus two submaxillary spaces exist, one immediately around the gland and the other outside the capsule. Therefore, infection in the jaw or lymph node may not involve the salivary gland itself, and the latter should not be incised indiscriminately. When the gland turns round the posterior border of the mylohyoid it juts in between the internal pterygoid and the lateral pharyngeal space, thereby making a direct route from the submaxillary to the lateral pharyngeal space.

Condensations about all the cervical vessels occur, and there seems to be a common condensation about the carotid and jugular, with separate compartments for each, but more loosely adherent to the vein. The sheaths of the lesser vessels communicate with the main trunk as was proven by injection.

Furthermore, the sheaths do not communicate with the lateral pharyngeal space as was contended by Beck. Barlow, therefore, believes that jugular vein thrombosis does not develop by direct transmission from the lateral pharyngeal space to the vein.

Barlow's serial sections of full-time fetuses further proved that (1) the cervical connective tissue is a continuous system having (a) condensations, (b) fatty and (c) areolar spaces (even in a three-month fetus this differentiation was well seen), (2) that there is a definite lateral pharyngeal space with the boundaries already mentioned demonstrating a relationship to the last molar tooth, ramus of the mandible, the digastric muscle, and

the retrovisceral region, (3) that the retrovisceral space reaches from the base of the skull nearly to the diaphragm, and (4) that the submaxillary gland is related to the pathway from the submaxillary triangle to the lateral pharyngeal space.

By his injections, Barlow showed that the fluid spread downward in the retrovisceral space without much difficulty but was obstructed in its lateral spread to the subvaginal space. It did not pass downward below the third thoracic vertebra. When injected under considerable pressure the fluid burst laterally into the subvaginal space and backward along the course of the intertransverse branches of the vertebral vessels. It could not be made to burst into the lateral pharyngeal space.

When the lateral pharyngeal space was injected it was found difficult to make the fluid burst its bounds but it did travel once to the submaxillary space and once into the parotid gland. When the space was distended, its medial wall bulged inward, carrying tonsil on its crest and causing swelling of the face by displacing the parotid laterally. Later it will be seen how this reproduces the objective signs of infection in this space. In no instance did the injected fluid penetrate the stylopharyngeal aponeurosis which protected the vessels wedged in behind it.

Injections of the *submaxillary space* spread, under increased pressure, (1) round the posterior border of the stylohyoid to the floor of the mouth where it produced a large bulge, (2) backward between the internal pterygoid and lateral pharyngeal wall into the lateral pharyngeal space from which it did not escape, (3) downward and backward inside the condensation about the common facial vein or its tributaries or about the lingual vein from which portion it entered the internal jugular sheath and extended up and down throughout the length of the neck and in one instance burst through the latter sheath into the subvaginal space.

The *jugular sheath* was easily injected the full length of the neck.

The *parotid space* was injected beneath



its strong superficial sheath (condensation) The gland was thoroughly infiltrated, and then the spread went upward toward the temporal fossa With increased pressure it passed into the lateral pharyngeal space and also along the sheaths of the facial and superficial temporal veins toward the common facial and external jugular veins

*Burns's space* was easily outlined by injection

The *subvaginal space* filled rapidly and most completely beneath the sternomastoid and the posterior triangle The injected fluid did not pass forward into the anterior triangle or under the trapezium, nor did it enter the retrovisceral or previsceral spaces or parotid, submaxillary, or lateral pharyngeal spaces, or vascular sheath

Injected fluid outlined a space in front of the muscles in the visceral unit that reached from the hyoid to the manubrium, and in the space behind the muscles it extended among the viscera and particularly around the trachea nearly to the pericardium

Barlow contends that jugular thrombosis does not travel directly from the lateral pharyngeal space to the vein but through sheaths of its tributaries, and therefore in its treatment, not only the veins leaving an infected area but also their sheaths must be ligated

Coller and Ygksias describe two spaces under the tongue, viz (1) between the mylohyoid and geniohyoid, (2) between the geniohyoid and genioglossus muscles In this latter space Ludwig's angina develops, from which it spreads to other spaces

I recently reviewed 49 histories of neck infections seen at the University Hospital within the last ten years and treated by several different men Cellulitis of the neck was the most common diagnosis, and Ludwig's angina was next in frequency From the meager description of the physical signs I must infer that some of the latter diagnoses were incorrect, and in most of the other cases there was no indication of which of the important spaces was involved Therefore, the

conclusion may be drawn that a knowledge of these spaces is not general and that information about them needs to be disseminated, without it diagnosis must be incomplete and treatment inadequate

In other cases that I reviewed, I noted the usual etiologic sources, viz infections in the nose, mouth, throat, sinuses, and jaws, also infections introduced by trauma, but the one factor that most impressed me was tooth infection and, most emphatically, tooth extraction All but one of the fatal cases had had teeth extracted before the onset of the neck infection, and local and block anesthesia was done in all these cases Therefore, tooth extraction or the anesthesia used for it carries a distinct hazard for the patient This, of course, is the dentist's problem, and in a personal communication, Dr Roth, a dental surgeon, stressed the advisability of watchful waiting before extraction of an infected tooth to permit nature to build up a protective wall about the root of the infected tooth In the meantime he advised removing fillings, if present, or drilling through the tooth into the socket and allowing gas that accumulates there to escape He stated also that in his opinion an osteomyelitis in the jaw is not produced by extraction but that the infection does travel to the soft parts if extraction is done too early

The symptoms noted in these cases included dysphagia, dysphonia, dyspnea, trismus, hoarseness, swelling, tenderness, induration, septic fever, chills, opisthotonos, edema of the glottis

Deserving special emphasis are trismus, hoarseness, and edema of the glottis The third may be suspected if hoarseness is noted and should if possible be looked for at frequent intervals if the process is extending Of course, if trismus is present, it cannot be found because of the impossibility of examination, and under such circumstances hoarseness should be considered presumptive evidence of its presence Trismus is mentioned by Beck as being the most important of the early signs of lateral pharyngeal space infection if some of the other causes of trismus can

be ruled out. This symptom is associated with conditions more or less acute, viz inflammation in the floor of the mouth, cheeks, pharynx, parotid gland, external auditory canal, osteomyelitis of the mandible, fractures and tetanus, but the most common cause of trismus is an acute infection of the lower third molar, although any other inflamed tooth in the mouth may cause it. Therefore it is but a part of the picture of lateral pharyngeal space infection and when present serves to direct attention to that space.

As was suggested by the injection experiments and borne out by clinical experience, one or more spaces may be invaded by an infection starting in any one of them, and such progression can be noted by a constant observation of the patient, keeping in mind such possibilities.

A review of the objective symptoms in the different space infections seems justifiable.

*Ludwig's angina*, better described as sublingual space infection, shows at onset sublingual swelling with a lifting up of the tongue, followed by swelling below the chin with induration and marked tenderness. The spaces involved are between the geniohyoid and the mylohyoid muscles (Coller and Ygksias).

*Lateral pharyngeal space infection* may occur alone (Ford) and is infected in one-half the cases of upper neck infections. Its objective signs are bulging inward of the pharyngeal wall with the tonsil lying on top of the bulge, and swelling over the parotid and below the angle of the jaw with local tenderness and trismus.

*Infection of the parotid space* is indicated by swelling anterior and below the auricle with restricted motion of the jaw.

*The submaxillary space* when infected causes well-marked swelling and induration below the mandible, with edema on the side of the face as the swelling below the jaw increases.

In the present review no cases of thrombophlebitis of the internal jugular were encountered. As an aid to diagnosis, the local signs of tenderness along the course of the vein are not dependable, since inflamed lymph glands in its course would

cause the same sign. A septic temperature, with or without chills, should lead to a suspicion of it, and Shapiro states that two chills calls for exploration of the vein. He also stated that 6 out of 7 such cases died. It must not be forgotten that sepsis may be present without any objective signs, but a blood culture may assist in the diagnosis of phlebitis, although a negative blood does not rule out phlebitis (Beck).

*Retropharyngeal abscess* occurs most often in young children and is suggested by dyspnea or dysphagia and at times by opisthotonos. The swelling can be seen and felt in the nasopharynx.

### Case Reports

Before proceeding to describe the surgical procedures, I wish to report the following cases.

*Cellulitis of the Face—Osteomyelitis of the Mandible*—These followed extraction of a tooth (upper third molar) on February 26, 1937, under local anesthesia (kind not mentioned). Four days later, March 1, she was admitted to the hospital with swelling of the left side of the face and neck and trismus.

On March 3 there was swelling of the scalp and behind the ear, March 5, swelling of the face, tenseness, and inability to swallow. On this day an incision was made over the parotid and below the angle of the jaw, and foul pus was evacuated, March 7—incision made anterior to the temporal muscle, evacuated much pus from beneath the muscle, March 24—incision made below the jaw in the submaxillary region and probably lateral pharyngeal space, evacuated much pus. Later operations included removal of teeth for necrosis of the mandible and removal of sequestrums.

The patient was in the hospital from March 1 to October 12. At present she has an ankylosis of the jaw.

*Cellulitis of the Neck and Face—Brain Abscess (Left Temporal)*—This patient was admitted to the hospital January 29, 1938, and died February 20, 1938. On January 15 she had two teeth extracted under local (block) anesthesia, and three to four days later had swelling of the face. It was red and tender on entrance to the hospital. Hot packs over the jaw were applied before entrance. Patient had severe pain.

On January 31 her temperature was 106 F and she had a chill, February 1 there was edema of the scalp and neck and some discharge from the mouth, which was later found to come

from the opening in the gingivolabial fold Her eyelids were swollen On February 5 foul pus was drained anterior to the left ear, February 13 more swelling was noted in the left parotid region and in the left submaxillary region—incised below the jaw and much pus obtained, February 15, stiff neck, February 19, somnolent, February 20, died

Autopsy brain abscess, abscess in pterygo-maxillary fossa, osteomyelitis of base of the skull (sphénoid)

*Abscess of the Face and Neck (Died)*—Onset June 19, 1938, three days after tooth extraction under local anesthesia On this day there was marked swelling under the jaw spreading to the right side, edema under the tongue reaching to the level of the teeth, dysphagia, and thick tenacious mucus from the mouth

Operation small incision below the jaw, no pus

On June 20 the swelling had increased tremendously (in twenty-four hours), more in the mouth and below the mandible, right and left, also over the parotid with pain in the ear and trismus

Operation incision from angle of jaw to angle of jaw below the mandible (local) Much pus was obtained

On June 21 tracheotomy was performed for dyspnea and husky voice (local)—extended incision around the angle of the jaw and bluntly opened into the space beneath the angle (lateral pharyngeal space), getting considerable foul pus June 22 incision into cheek toward the right auricle—some pus June 23 ligation of the external carotid because of bleeding from the wound

From then until July 9 there seemed to be some improvement, but there was drainage into the mouth On July 9 she had chills on two occasions On July 10 there was much bleeding from the wound—died

Four other cases have died 1 a Ludwig's angina with diabetes, two days after entrance to the hospital, 2 others under general anesthesia, and still another four days after a wound in the neck had been sutured The notes were of little value, and presumably it was a blood-stream infection

## Treatment

It remains then to describe the recommended procedures and also the anesthetics to be used Any suggestion of a narrowed airway should rule out the use

of general anesthesia until a preliminary tracheotomy has been done. Two cases in this series, 1 a case of my own that autopsy proved to be edema of the glottis, died shortly after a general anesthesia had been started Since that experience I have used local anesthesia intradermally for the skin incision and the superficial fascia, and even though it produces pain for the patient I have burrowed into the depths with a blunt forceps to locate and drain the pus if it seemed to be localized Otherwise I do a preliminary tracheotomy for the administration of the general anesthesia, using ether or one of the gases except nitrous oxide Proceed deliberately into the depths, ligating vessels as they are met, and, after the deep fascia has been divided, use the finger or blunt forceps to go more deeply

*Ludwig's angina* (sublingual space infection) is opened by an incision in the median line below the chin or through a transverse incision in the same area. After incising the skin, push a blunt forceps through the muscles in the floor of the mouth and spread wide open

*Submaxillary space* is opened (Mosher) by an incision a thumb's breadth below the border of the jaw, deepened through the roof of the space and opened more deeply with a blunt forceps

*The lateral pharyngeal space* may be opened (Watson and Williams) if it alone is involved, and there is a definite pointing by an incision behind the posterior tonsillar pillar, at the level of the lower pole of the tonsil Then push a blunt curved forceps outward and slightly forward, but they add, if pus is not obtained, make an external incision

The external incision recommended by Mosher, as described above, may have a vertical one added to its middle extending downward, and, after entering the submaxillary space, lift the gland out of its bed, locate the tip of the great cornu of the hyoid, and enter the space with the finger or a blunt forceps pushed forward, anterior to the carotid sheath

Coller and Ygksias extend the incision backward below the parotid pole which they expose and lift up By dissecting

anterior to the carotid vessels enter the space

Since parotitis is responsible for some cases of lateral pharyngeal space infection its treatment should be mentioned. At the onset it is favorably influenced by radium packs or x-rays and the application of moist heat in the interval. If it does not respond in two days (Blair) or three days (Coller and Ygksias), an incision should be made 2 cm., anterior to the auricle, downward to behind and below the angle of the jaw and deep to below the fascial covering of the gland. Then a blunt forceps should be bored into the gland until pus is found. Chewing gum and dilating the duct are also adjuvants to other treatment.

*Retropharyngeal abscesses* can usually be opened through the mouth, but if there is a swelling under or behind the sternomastoid, then they can be opened by incisions anterior or posterior to the muscle.

*Thrombophlebitis* of the internal jugular, in addition to ligation of the vein itself and removal of the clot, should have its tributaries and their sheaths ligated as recommended by Barlow.

### Conclusions

1. Tooth extractions carry a big hazard to the patient.

2. Early recognition and proper treatment without delay will avert fatalities.

3. Local anesthesia is preferred in all these cases, particularly if there is any edema of the glottis. If a tracheotomy has been done, then, of course, a general anesthetic may be used through the tracheotomy.

### Discussion

Dr James A. Fisher, *Asbury Park, New Jersey*—It is a privilege to discuss Dr Swift's paper, especially when the subject deals with one of such tremendous importance. Dr Swift has so thoroughly reviewed the physical and surgical anatomy that I can only emphasize with some of my own experiences the points he has stressed.

Since Dr Harris P. Mosher gave his presidential address on this very subject before the American Academy of Ophthalmology and Otolaryngology in 1929, there has been a very definite campaign of education among the otolaryn-

gologists of this country on neck infections. Dr August L. Beck, of New Rochelle, presented one of the very best analyses of the subject before the same body in 1932.

The records during the past five years at the Fitch Hospital, Asbury Park, showed 34 cases of deep neck or fascial plane infections, and at the Monmouth Memorial Hospital, Long Branch, New Jersey, 21 cases. Between the two institutions there were then 55 cases. Twenty (36 per cent) were of submaxillary fossa. Six (10 per cent) were parotid fossa infections. Five (9 per cent) were frank pharyngomaxillary fossa infections. Deep cellulitis, which includes infections in the visceral or vascular fascial sheaths, accounted for 8 or 14 per cent. Those classified as submental or Ludwig's angina were 10 in number or 18 per cent. Deep glands, giving the severe symptoms of rapidly spreading fascial infections numbered 5 cases or 9 per cent, and 1 (2 per cent) suppurative branchial cyst wrongly diagnosed as cellulitis preoperatively.

In this series there was 1 death from infection in the pharyngomaxillary fossa caused by spontaneous rupture into the lateral pharyngeal wall and secondary hemorrhage. This was one of the most tragic experiences of my medical career. The child, who was the daughter of a physician, had had a severe upper respiratory infection. One week previous to death I had seen the child for the express purpose of ruling out a suspected retropharyngeal abscess. There was general lymphoid swelling in the pharynx but no bulging of the post or lateral pharyngeal wall at that time. I did not see the child again until the emergency arose. The child's father called me on the phone from a neighboring town and explained that there had been a violent hemorrhage but all bleeding had then stopped. I rushed to his home and found the child quite exsanguinated, and there was such a degree of trismus present that I was unable to examine the child without first administering a few inhalations of anesthesia. With a tonsil suction apparatus, I cleansed the nasopharynx of clots and located on the left pharyngeal wall a rent in the mucosa that would easily admit the entrance of the suction tip. No further bleeding could be forced even by suction. I returned to my office and was told that the patient was on the way to the hospital, following a second massive hemorrhage. Immediate arrangements were made for carotid ligation, but the child expired as she was brought to the operating room. No experience has ever crushed me as this one did.

A second severe hemorrhage case occurred in one of the submaxillary infections. Upon opening the capsule of the submaxillary gland, there

TABLE 1 —NECK INFECTIONS  
Pitkin and Monmouth Hospitals  
1933-1938

	Percentage
Staphylococcus	43
Streptococcus hemolyticus	18
Streptococcus nonhemolyticus	29
Mixed	10

TABLE 2 —NECK INFECTIONS

	Cases	Percentage
Submaxillary	20	36
Parotid	6	10
Pharyngomaxillary	5	9
Deep cellulitis	8	15
Ludwig's angina	10	18
Deep glands	5	9
Branchial cyst	1	2
	55	

was a profuse hemorrhage from the depths that could only be controlled by forcible packing. The patient recovered.

A different type of infective process is the virulent case that lasts but a few hours after inception. A school teacher first seen with beginning edema of the larynx late in the afternoon, two days after the start of an attack of acute sore throat, required a tracheotomy the same evening. The following morning the process had extended until her throat was swollen in its entire circumference. The patient was comatose, temperature 104 F, and was immediately operated on with wide dissection of all fascial planes, which were all filled with edematous fluid. Culture showed hemolytic streptococcus from several different locations in the fascial planes. Patient expired twenty-five hours from my first visit.

Just to cite 1 more case that illustrates so vividly the method of extension without thrombosis or blood-stream infection. An elderly man

was seen in consultation in his home with an abscess of the base of the tongue that was evacuated. Two weeks later he surprised me by being admitted on my service in the Monmouth Memorial Hospital. His entire neck was greatly swollen and fluctuation could be elicited at almost any point one desired. Because of the wide extent of involvement, a large exposure was made with bilateral Mosher T flap incisions. There were no fascial compartments left whatsoever. Practically every bit of connective tissue had been digested or liquefied, and all structures, visceral, vascular, and muscular, were skeletonized. Through-and-through drainage in various layers was instituted, and the old gentleman made an uneventful recovery.

Infections in these areas demand bold surgery at the opportune time. I usually employ the Mosher incisions, but when one feels reasonably certain that a small incision will surely strike the infection, there is a safe area of approach that is free of vital structures. This was demonstrated to me by Dr. Oscar V. Batson, of Philadelphia, a few years ago. It is located directly behind and very slightly below the angle of the mandible. Entering here, one makes an incision through the fused fascia between the parotid and submaxillary glands. Then by blunt probing, one can gain access to the submaxillary, the parotid beneath the mandible, and also follow up inside of the internal pterygoid to tap the pharyngomaxillary fossa. However, in this approach one must absolutely locate the angle of the jaw no matter how brawny the swelling before entering deeper structures, otherwise the free exposure is essential, first locating the great horn of the hyoid in relation to which all important structures deep in the neck are identified.

### SONNET ON THE DEATH OF PAUL EHRLICH, DISCOVERER OF SALVARSAN

O knight of silent hour and silent soul,  
Warrior of wonders, steadfast, patient, bold,  
Bereft of life, whose secrets were thy goal,  
Thy hand lies helpless and thy genius cold!  
Not so! Thy works they still shall play the role  
Of saviour calm of blasted young and old,  
Where guilt or innocence from pole to pole  
Their aching hearts or blinded eyes uphold

Thy mortal end hath chanced upon an earth  
Beclouded, grimy, guilty with the breath  
Of blackest war that spares nor man nor hearth,  
Thy spirit ne'er shall bear the badge of death.  
For thou has saved, and not destroyed in strife,  
And thou has conquered death, and given life.  
—Jerome Meyers, M.D., District Health Officer,  
Mott Haven Health Center

### THE JEFFERSON MEDICAL COLLEGE

During the convention of the American Medical Association in New York City, June 10 to 14, 1940, the Jefferson Medical College Alumni Association will hold its Reunion Banquet on Wednesday, June 12, at 7:00 P.M. at the Murray Hill Hotel on Park Avenue at Fortieth Street. Tickets are \$2.50 each.

Requests for reservations may be addressed to me at that hotel.

But if you neglect to make reservations—come anyway

THOMAS F. DUHIGO, Chairman  
Dinner Committee

# CARCINOMA OF THE BREAST

LOUIS C KRESS, M D , F A C S , WALTER T MURPHY, M D , and  
EUGENE M BURKE, B S , Buffalo, New York

(From the State Institute for the Study of Malignant Disease, Buffalo)

TWO years ago at the meeting of the New York State Medical Society an opportunity was afforded the authors to present a paper on cancer of the breast, which covered diagnosis, treatment, and an experience of two years with preoperative radiation. This discourse will deal with our impressions gained over a four-year period in studying 129 patients with cancer of the breast who received preoperative radiation.

## Classification

The classification of breast cases advocated by the American College of Surgeons was chosen because of its simplicity and universal use. In order to understand and evaluate what is to follow, the classification is described as follows: (A) Disease in breast ax. glds. not involved (B) Disease in breast ax. glds. ? (C) Disease in breast ax. involved (D) Disease in breast supraclav. glds. involved (E) Remote metastases—bone, lung, etc.

This grouping is clinical but can be proved following surgery and by means of the microscopic examination of the tissue obtained. This series of patients consisted of 129 divided into the different classifications as follows: group A—57, B—1, C—61, D—7, E—3. Of these 129 patients only 3 were males, all of whom fall in class C. Of the 126 women, 9 were single and 117 were married. In this number 91 had children while 26 had none. It can readily be seen that the two main groups are A and C. This is logical because seldom is surgery attempted in the presence of nodal involvement of the supraclavicular region, except perhaps for hygienic purposes, with no idea of cure, whereas, when the disease is confined to the breast or if only the axillary nodes are

involved, an earnest effort is made to obtain a cure. It has been our experience that at times nodes are palpated in the axilla with the presence of a definite malignant lesion in the breast, and, clinically, it is difficult or impossible to tell whether or not the palpable nodes are due to hyperplasia or definite metastatic involvement. Therefore, patients with palpable axillary nodes are considered operable risks, but in most clinics the true operable carcinomas of the breast are those that are confined to the breast alone. The percentage of early malignancy of the breast has been increasing within the last few years, evidently as the result of popular education concerning cancer.

## Age

A statistical study of these patients has been made, and many interesting and enlightening facts have been ascertained. The age incidence, as shown in Table 1, indicates that none of the patients in this series was under 30 years of age, the predominance lying between 40 and 70.

TABLE 1

Group	Age Under						Total
	30	30-39	40-49	50-59	60-69	70-79	
A	0	7	15	15	17	3	57
B	0	0	0	0	0	1	1
C	0	11	14	18	15	3	61
D	0	3	0	0	3	1	7
E	0	0	1	1	0	1	3
All groups	0	21	30	34	35	9	129

## Location of Cancer in Breast

An effort was made to determine the most prevalent location of the tumors in these breasts. In all groups the area in both breasts most frequently involved was the upper outer quadrant. In group A there were 15 found in the right upper outer quadrant, 5 in the right upper inner, 2

in the right lower outer, and 1 in the right lower inner. In the left breast 16 tumors were found in the upper outer quadrant, 6 in the upper inner, 3 in the lower outer, and 3 in the lower inner. The upper half of the right breast was involved once and in the left breast twice, with the entire breast being involved twice in the right and once in the left. In group B the entire breast was involved, there being only 1 patient in this group. In group C, the largest group, 22 tumors were situated in the right upper outer portion, 6 in the upper inner, 3 in the lower outer and none in the lower inner, while in the left breast the upper outer was affected in 18 instances, the upper inner in 2, the lower outer in 3, and the lower inner in 1. The upper half was involved in 1 case and the area about the nipple and areola in 1. The entire breast was involved once in the right and 3 times in the left. In group D the 7 patients presented their malignancies as follows: 2 in the right upper outer quadrant, 1 in the upper inner, 1 in the left upper outer, and 1 in the left lower outer portions. The entire breast was involved once in the right and once in the left. In group E the lower half of the right breast was involved once, the upper outer once, and the region of the nipple once. According to the lymph drainage it would appear from the tables below that the most frequent area of metastatic involvement would be the axilla. That being true, our efforts in preoperative x-ray therapy should be directed to the axilla, and the same principle would hold true when postoperative x-ray is employed. A more composite picture of all the groups discloses the fact that 39 tumors were found in the right upper outer quadrant and 35 in the left in the corresponding area, while in the upper inner quadrant 12 were located in the right and 8 in the left. The lower outer predominated over the lower inner, the former having 5 in the right and 8 in the left. There were 1 in the right lower inner and 4 in the left lower inner. The entire right breast was involved 4 times and the left 6. The upper half was affected twice in both breasts and the nipple area once in each

breast, while the lower half was involved once in the right and none in the left. Practically an equal distribution of malignancy is shown in both breasts, but it is interesting to note that the upper outer quadrant of both breasts was the most common site of the original tumor.

### First Symptoms

The symptoms of cancer of the breast are varied, but the early signs as the patients described them in their histories are worthy of mention. A lump in the breast, bleeding from the nipple, and ulceration or excoriation of the nipple or areola are the early symptoms of cancer of the breast. Best results are obtained when patients suffering from this disease complain of one of these three, but after they notice retraction of the nipple or skin over the tumor, nodules in the axilla or supraclavicular or metastasis to the spinal column, liver, mediastinum, or lung, the results are not encouraging. The first symptoms described by the patients are shown in Table 2.

TABLE 2

Symptom	A	B	C	D	E	Total
Lump	45	1	43	6	1	96
Pain	4		12		2	18
Bleeding from nipple	2		1	1		4
Retraction from nipple	1		3			4
Itching of skin	1		1			2
Discoloration of breast	1					1
Pain in axilla	1					1
Abscess	1					1
Fullness of breast	1					1
Scab after injury			1			1

The lump in the breast is the predominating symptom, pain being second. However, the presence of the lump as the first symptom occurred over five times more frequently than did pain. It can be concluded from this study that lumps in the breast are usually the first symptom and are not accompanied by pain. This bears out the contention that every lump in the breast should be considered cancer until proved to be otherwise. The method of determining its character is not by sight or palpation but by removal and examination under the microscope. The place to diagnose a lump in the breast is not at the

bedside or in the office but in the pathologic laboratory. No physician should wait until a patient complains of pain following the appearance of a lump before becoming suspicious of cancer, but he should think of malignancy on first consultation. The above chart also reveals that the other symptoms of which patients complain are varied and not as constant as the lump and pain.

The charts below indicate (1) the discovery of malignancy in the breast by patient or physician and (2) the delay on part of the patient from the discovery of the first symptom to the first consultation by a physician.

Group	M D	Patient
A	7	50
B	0	1
C	0	61
D	1	6
E	0	3
Total	8	121

	Average
A—1 day to 6 years	10.9 mo
B—4 years	48 mo
C—1 day to 5 years	6.6 mo
D—1 month to 3 years	8.1 mo
E—4 months to 3 years	21.3 mo
Average of all groups	9.28 mo

### Remedy for Delay

People do not visit their physicians for a periodic check-up and do not know how to palpate their own breasts. Thus, most of the lumps in the breast are discovered accidentally by the patients and are necessarily quite large to attract the patient's attention. This is shown emphatically in this series wherein only 8 tumors out of a total of 129 were discovered by a physician. It would appear from the foregoing that there is a great need at the present time to conduct suitable education among lay people by making them familiar with the periodic health examination, by teaching them to palpate their own breasts, and by urging them to see a doctor immediately upon discovery of a lump in the breast. Some means must be found to make women familiar with the seriousness of discovering a lump in the breast. At the present time the best method at our disposal is lay education in the medium of popular talks before small groups, articles

in popular magazines, radio broadcasts, and exhibits. Although these projects have been very effective, there is still a great opportunity for the medical profession to be of great service to humanity by leading or participating in a concentrated educational program concerning cancer and all other types of malignancy.

### Pathology

All of the tumors in this series were proved malignant either by aspiration biopsy, careful removal of a small piece of the tumor, or operation. It has been the rule not to institute preoperative radiation until a definite diagnosis has been made. In most instances biopsy was performed before radiation, but in a few patients a clinical diagnosis of cancer was made and a positive section was obtained following mastectomy. Occasionally, sections were obtained from the glands in the axilla but this was not done as a routine procedure. Every tumor in this study has been proved malignant by microscopic study, and no cases have been included that were considered cancerous from only the clinical standpoint.

In this series a study was made of the biopsy in each case to determine the predominant cell type. After radiation the pathologic sections of the amputated breast were studied to determine the effects of radiation on the tumor cells and on the breast stroma. On the basis of histologic observations these tumors were classified into three groups.

The first group is composed of those tumors in which the malignant epithelial cells are large and cuboidal in shape and undifferentiated in type. These cells show very slight variation in size, shape, and staining property. They are most characteristically found growing either in large solid masses and infiltrating bands or, when undue fibrosis has occurred, compressed into small isolated groups, maintaining, as a rule, their original form. This group comprised 75 per cent of the series studied.

Tumors showing a predominant ability to form glands are placed in group two. In its more differentiated form, gland



formation is maintained, but in its more anaplastic version, the growth may show solid masses of tumor cells with only a few formed glands. Ten per cent of the tumors in this series fall in this group.

Group three, comprising 15 per cent of the tumors studied, is made up of those neoplasms in which the epithelial cell is small and undifferentiated in type. The cells of such tumors appear to be little affected by radiation.

The changes noted in tumor cells after irradiation vary considerably. In some breasts slight, if any, histologic change is found in the tumor cells that remain as anaplastic as before treatment. This is especially true of the tumors in group three. In the majority of the tumors in groups one and two, however, some changes are noted in the malignant cell. These changes consist of variation in size, shape, and staining characteristics of the cells and their nuclei, keratinization in individual cells, karyorrhexis with vacuolization and degeneration in the advanced stages. Few cells are seen in mitosis.

The breast tissue after irradiation shows an increase in the amount and density of fibrous connective tissue throughout, blood vessel walls are usually thickened and their lumina at times occluded, while calcium deposits in the intima and mediums are of frequent occurrence.

The patients in whom sterilization of the breast tumor was accomplished are found in the main to be those with neoplasms of the large cell type. Of these histologic groups 86 per cent are found in this histologic group (group one), while the remaining 14 per cent are noted in those patients on whom a diagnosis of adenocarcinoma had originally been made on the biopsy specimen.

On the basis of the total number of patients in group one, 36 per cent are found to have no tumor cells in the amputated breast, while the adenocarcinomas (group two) show 23 per cent free from disease. No sterilization occurred in group three.

We can therefore say that the best results in this series are found in the large cell carcinoma and in the adenocarcinoma groups and that the small cell carcinoma

group has the highest percentage of deaths and shows the least favorable response to radiation therapy. In this group (group three) the patients alive and well since treatment show a maximum time of two years and three months.

### Radiation

Both preoperative and postoperative irradiation have been employed at this institute. The action of x-rays on the cancer is no more important than the action on the tumor bed. Hence, the technique must be one of deliberate exactness, both from the point of view of the local tumor and the patient herself. Such general factors as age, nourishment, cardiovascular tone, and blood picture bear great weight in the outline of x-ray treatment. It is known that a tumor in a well-nourished bed will respond more favorably than one in a poorly nourished bed—for example, scar tissue.

It has also been found that the response to irradiation depends not so much upon the quantity of x-ray but upon the method of distribution of this quantity. This brings us to the problem of treatment technique. Since it is imperative that the cancer cell receives a maximum intensity while the normal tissue receives a maximum respect, multiple portals of entry are used when feasible. The routine treatment factors are kilovolts, 200, milliamperes, 25, filter—copper, 0.5, aluminum, 1.0, half value layer, 0.9 copper, effective wave length, 0.16 Å.

Should the breast be large enough to cross fire tangentially, both medial and lateral ports are used. If this is not possible, an anterior port, varying with the size of the breast itself, is used. The field sizes vary from 50 sq cm to 250 sq cm. The skin target distance is 25 cm to 50 cm, according to the thickness of the tissue to be irradiated. Separate fields are used to cover the axilla and subclavian and supraclavicular areas. These ports vary from 80 sq cm to 200 sq cm at 50 cm skin target distance. Usually two ports are treated daily. When there are as many as four or five ports, a suitable cycle is employed—for example, a medial

breast port and the axilla port one day and the next day the lateral breast port and supraclavicular port.

The daily increment per port varies from 300 r to 400 r (tissue scattering). The breast portals, when cross fired in cycle, receive a total dose of 4,500 r to 5,500 r depending upon the thickness of the tissue. When one breast port is used daily, this skin receives a total of from 2,400 r to 3,200 r (tissue scattering). The total skin doses to the axillary and supraclavicular fields vary from 2,200 r to 2,800 r (tissue scattering). It has been found that a marked epidermite appears in the fields treated about the twenty-fourth to twenty-seventh day. About ten to fourteen days later epidermization is quite complete.

Preoperative irradiation attempts to diminish the virulence or sterilize the more radiosensitive elements, thus making the surgical procedure safer. It also might change an inoperable tumor or a tumor of border-line operability into an operable one. The arguments against preoperative irradiation include the possible danger of dissemination during the waiting period and the interference with postoperative healing.

Postoperative irradiation is used only for recurrences or in those cases in which complete radical mastectomy was not done. It is felt that more thorough radiation given to definite sites, such as recurrent nodules, will bring about much better end results than routine prophylactic treatment of an already irradiated skin.

### Results of Preoperative Radiation

Sterilization of the primary tumor occurred in 18 patients in group A. Of this number both the breast and axillary involvement were sterilized in 1 case, and in another patient the axilla was sterilized but not the breast. In group C, 7 of the tumors were sterilized, thus making a total of 19 per cent for all groups. Sterilization means that no demonstrable cancer cells were found in the breast after removal. This fact is not so important, since a surgeon can remove the primary growth immediately by surgery. Our ef-

forts in preoperative radiation should be directed toward the axilla, especially in group C although the desired results were not obtained in this series of patients. Preoperative radiation did not cause the axillary glands to disappear, and in only 19 per cent of the cases did the primary growth in the breast disappear. This would lead to the opinion that preoperative radiation or radiation in itself cannot replace accurate and careful surgery in dealing with carcinoma of the breast. The time has not arrived to set aside surgery for radiation in operable carcinoma of the breast. The privilege has not been accorded our group to use voltage higher than 200,000. The higher voltage and heavier filtration may offer more than the 200,000-volt x-ray machine, but the present results are not wholly satisfactory.

### Surgery

The radical amputation according to the Willy-Meyer method was used in most instances but occasionally a simple mastectomy was performed. In group A, 52 out of 57 had radical operations, B, 1, C, 56 out of 61, D, 6 out of 7, and E, none. In most instances the reason for not doing a radical operation was that it was performed to eliminate an ulcerating, infected lesion. Perhaps these patients should not have been included in this study but it was deemed best in order that proper evaluation could be made without hand picking these cases in calculating final results.

### Postoperative Phenomena

There seems to be a greater tendency toward obtaining swollen arms following radical mastectomy when preoperative radiation is practiced. In this series this occurred in 7 patients in group A and 9 in group C, making a total of 17 out of 129 or 13 per cent. The treatment for this condition, other than palliative, symptomatic measures, has not been devised. The swelling develops at various periods of time following amputation. At times it causes both the patient and surgeon much concern, because there is no specific treatment that will give results.

Delayed union is another distressing condition accompanying mastectomy that has been preceded by irradiation. In this series it occurred in 14 patients in group A and in 16 in group C, making a total of 25 per cent. Considering the average time of healing of an incision as two weeks, some of these patients remained unhealed from six to sixty weeks, the average being thirteen and nine-tenths weeks. Delayed union seemed to occur in those patients in which a period longer than eight weeks had elapsed from the time radiation was finished to the time of operation. In a few instances this occurred within the eight- or ten-week period, but for the majority, delayed union resulted when, for some reason either on the part of the patient or the radiologic department, amputation was deferred longer than eight weeks. The treatment for delayed union and the sloughing areas seems to be trimming away the necrotic tissue and then applying a combination of urea and allantoin. This combination has given the best results in our hands. The delay in healing also results in marked edema of the axilla but seldom interferes seriously with the motion of the arm.

### Time Elapsed Between Radiation and Surgery

The time elapsed in this series is well above the average because of 2 patients who were operated on 208 and 128 weeks, respectively, after therapy. Although they had amputations for hygienic reasons, they had received preoperative radiation, and we thought it best to include them. The average length of time waited was between eight and twelve weeks. From our experience eight weeks is the suitable time provided the skin has recovered from the radiation reaction so that healing may take place. In many instances large amounts of radiation were given resulting in a severe skin reaction so that more time had to be allowed.

### Complications

Many of the patients had complications associated with the carcinoma of the

breast. Three had carcinoma of the opposite breast. All were considered distinct primary growths and not metastases because of the extended time before the other breast was affected. Listed among the other complications are carcinoma of the ovary, nevus cell carcinoma of the upper lip, melanoma of the arm, epithelioma of the inner canthus of the eye, heart disease, pneumonia, diabetes, carcinoma of the stomach, epithelioma of the cervix, and hyperthyroidism.

### Metastases

Metastases occurred in 38 per cent of all cases, the chief sites being the lungs, axilla, skin, spine, pelvis, and supraclavicular region as follows: lungs, 21, axilla, 16, skin, 14, spine and pelvis, 12, supraclavicular, 10, liver, 4, other breast, 4, femur, 3, ribs, 3, scalp, 1, skull, 1, humerus, 1, umbilicus, 1, brain, 1, adrenal gland, 1.

### Results

Most of the patients in this series have not been under observation long enough to evaluate five-year cures, but much information that may now be applied throughout the required length of time has been obtained from this group. The following tables give the results to date.

ALIVE AND WELL							
No of Cases	Group	0-1 Year	1-2 Years	2-3 Years	3-4 Years	4-5 Years	Total
57	A	7	22	8	7	2	46
1	B	0	0	0	0	0	0
61	C	3	10	12	2	1	28
7	D	0	1	0	0	0	0
3	E	0	0	0	0	0	0

ALIVE WITH METASTASES							
No of Cases	Group	0-1 Year	1-2 Years	2-3 Years	3-4 Years	4-5 Years	Total
57	A	1	1	1	0	0	3
1	B	0	0	0	0	0	0
61	C	2	6	5	3	1	17
7	D	0	0	0	0	0	0
3	E	0	0	0	0	0	0

RESULTS			
Group	Alive and Well	Alive with Metastases	Dead
A	46	3	8
B	0	0	1
C	28	17	16
D	2	0	5
E	0	0	3
Total	76	20	33

## Conclusions

1 None of patients in this series was under 30, predominating age group being 40 to 70

2 Occurrence of malignancy equal in both breasts

3 Most common site of cancer is upper outer quadrant of breast.

4. Lump was principal first symptom, pain being next.

5 Most lumps were discovered by patient. Physician does not have opportunity to detect early cancer as patients do not have periodic health examinations

6 Delay from time of discovery of first symptom to first medical consultation averaged 9 28 months

7 Popular cancer education is the solution for the delay in discovery of lump

8 The value of preoperative radiation is questionable. It cannot replace surgery to date

9 Nineteen per cent primary tumors are rendered sterile by preoperative radiation

10 Very few axillary glands are sterilized by preoperative radiation

11 Swelling of arm and delayed union are encountered more often when preoperative radiation is used

12 The most suitable interval to elapse between radiation and surgery is eight weeks

13 The pathology has been divided into three groups known as the large cell, the adenocarcinoma, and the small cell. The large cell type was found to be more sensitive to radiation, the small cell was the least, and the adenocarcinoma lay between these two groups

## Discussion

Dr Samuel George Schenck, *Brooklyn, New York*—I have a great deal of interest in the presentation of Dr Kress and his co-workers and find their remarks most instructive and illuminating. I was pleased to note that the authors placed a good deal of importance on a clinical classification for breast cancer, although I take exception to the classification recommended and sponsored by the American College of Surgeons. This classification, as well as the classification suggested by Dr Stenithal, Dr Pfahler, and Dr

Portmann has certain pronounced disadvantages, although some of them may be recommended for their brevity.

I have been interested in a clinical classification for breast cancer for several years. A classification that will give the most information, not only in regard to the clinical status of the patient but also in directing the management of the case and in evolving a suitable or accurate prognosis for the type of grouping, is most serviceable. Such prerequisites, I believe, are to be found in the classification about to be presented, a more detailed account of which is given in the April, 1939, issue of *Surgery*. All breast carcinomas, when first seen for treatment, may be grouped into one of four clinical stages.

In stage 1, we deal with a small primary tumor, less than 3 cm in diameter, freely movable in regard to the skin and underlying tissues with no palpable evidence of disease in the adjacent axilla, supraclavicular space, contralateral breast, and lymph-draining areas or distant metastasis. These are the so-called early cases, and unfortunately very few patients present themselves for treatment in this stage. The prognosis, however, is excellent, and about 90 per cent are cured with radical surgery or with radical radiation therapy or both.

Stage 2, however, is of more interest because a greater percentage of patients comes into this category. A patient is relegated into stage 2 when the primary growth is from 3 to 6 cm. in diameter, providing the tumor is not firmly adherent to the overlying skin or to the underlying structures. The adjacent axilla may show evidence of one to three palpable nodes that measure less than 2 cm in diameter and are freely mobile. The supraclavicular space should be cancer free, and the same should be true for the contralateral side and for the remaining systems of the body. Such cases have a fair prognosis, and they are managed by intensive irradiation, both preoperative and postoperative, as well as by radical surgery. Fifty to 60 per cent show a 5-year survival rate.

In stage 3, into which a large number of patients also falls, we are dealing with a tumor that is larger than 6 cm in diameter, or, regardless of its size, the tumor is firmly adherent to the skin or to the underlying pectoral muscle and fascia. If the tumor is ulcerated or the breast is inflamed (inflammatory carcinoma), the case is placed in stage 3. Regardless of the breast status and considering only the adjacent axilla, if a node is larger than 2 cm in diameter, the case is designated as stage 3. If there are more than three nodes present it still falls into the same category. Should one or more glands,

regardless of size and number, be firmly fixed in the axilla, such a case belongs to this group. Should a gland be ulcerated in the axilla or, regardless of the nature of the glands, should the upper extremity show evidence of swelling before surgery or irradiation has been instituted, such a case belongs to this group. In addition, irrespective of the observations in the breast and the axilla, if one definitely palpates a malignant node in the supraclavicular fossa, such a case belongs to stage 3. If there is a contralateral metastasis either in the opposite breast, axilla, or supraclavicular fossa, the case is categorized in stage 3. Should there be evidence of metastasis to the chest, mediastinum, ribs, or any distant focus of metastasis, such a patient also belongs to this group. Therefore, you can readily see that such patients may be considered as late cases of carcinoma. The prognosis is bad, and only 5 to 10 per cent may be salvaged after five years. Stage 3 is a radiation problem and not a problem for radical surgery. It is on account of this group that the statistics in the medical literature are so confusing to one who is seeking the truth. The criteria for curability and inoperability vary so markedly at surgical clinics and cancer institutes that a clear-cut clinical classification that presents precise qualifications for each individual group is important not only for the purpose of determining the proper course to pursue in managing the case and in evolving a proper prognosis, but also for the purpose of accumulating statistics that would be clear cut, understandable, and prove of infinite value in evaluating end results.

Stage 4 is exclusively reserved for patients who first present themselves to us after radical surgery. They form two large groups (A) with no evidence of recurrence and (B) with recurrence. The prognosis in the latter is naturally poor. The treatment is confined purely to irradiation with x-rays, radium, or both, with or without conservative surgery. Hence, in the first two stages the management of breast cancer resolves itself to radiation and surgery. The prognosis is fair, and from 50 to 90 per cent may be salvaged. In the last two stages, which are purely radiation problems and are definitely late cases, the prognosis is poor, and usually from none to 10 or 15 per cent may be saved.

From the same classification chart one can now definitely enumerate the factors upon which operability and inoperability in any given case depend. Thus, the prerequisites that place a case in stages 1 and 2 make up the operative criteria, and, by the same token, the factors enumerated for patients designated to stages 3 and 4 present the contraindications to radical

surgical procedures. My experience with this classification extends over 200 cases in which this grouping has proved most serviceable.

In the past two and one-half years we have given preoperative irradiation in more than 60 cases. The number is small, which we feel is due to the fact that most of our patients present themselves for therapy after they have received radical surgical intervention elsewhere. We feel, as the authors do, that preoperative irradiation tends to sterilize the tumor and the axilla, and we have shown this to occur in about 20 per cent of our cases. Sterilization of the tumor, however, does not occur frequently enough to give one a sense of security in this mode of treatment alone. Nevertheless, what does occur frequently is the devitalization of the tumor, which not only stops growing but also recedes in size very noticeably, but yet is not thoroughly sterilized. This is more apt to occur in the primary growth than in axillary metastasis and should not give the false sense of security that the patient is being cured. That, I feel, is the danger of preoperative irradiation, because, to the uninitiated, the shrinkage of the growth tends to postpone radical surgical intervention, a danger which cannot be overestimated inasmuch as the tumor is only sterilized in one-fifth of the cases. I have seen such a false sense of security following preoperative irradiation indulged in by the patient, her family, and particularly by the family practitioner. Every operable case should have a radical mastectomy not later than eight weeks following the completion of radical irradiation, and it is foolhardy to postpone this procedure for more than two or three months.

Dr Kress is somewhat annoyed by the pronounced skin reaction which sometimes delays the operation for many months in certain cases that have received intensive preoperative irradiation and that may prolong the healing of the wound. These results may be obviated by higher filtration (2 mm copper instead of  $1\frac{1}{2}$  mm copper as employed by the speaker) and somewhat smaller total doses. However, I supplement the preoperative therapy with a thorough course of irradiation about six to eight weeks following operation, after which the case is completed except for diligent observation and inspection at two- to four-week intervals for the first two years, monthly intervals until the fifth year, and then semiannual inspections thereafter. We are of the opinion that by such regimen the end results may be improved. By the clinical grouping of patients as suggested, final statistics will be intelligible and a better mutual understanding between therapists, surgeons, and clinics may be looked for in the future.

# THE NEW YORK DIABETIC ASSOCIATION

## Summer Camp for Underprivileged Diabetic Children

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WHEN the New York Diabetes Association was founded in 1935, it was decided that one of its prime objectives was the establishment of a summer camp for underprivileged diabetic children. The start was made in 1936 which was followed each succeeding summer through last year when the fourth session ended on August 31, 1939. In this communication we are reporting our experiences with the camp during the four years.

The camp has been supported entirely by voluntary contributions. The funds available in 1936 allowed a total of 32 children to be sent to the country for a two-week period, groups of eight being cared for at a time. In 1937 it was possible to increase the number to 40 with 10 going in each group. In 1938 accommodations for 12 at a time could be made but only three groups, with a total of 36, were able to go. In 1939 finances improved and 48 children went to camp, first the 12 young girls, then the 12 young boys, followed by the 12 older girls and in turn by the 12 older boys. In all, 155 vacations were given to 106 diabetic children, 35 coming two years, 10 coming three years, and 4 coming four years.

The camp site was rented each year. The first and second camp was situated in the same farm house at Mountainville, New York. The third occupied part of a health farm at Kerhonkson, New York. In 1939, the fourth year, a nursery school on Lake Lefferts, near Matawan, New Jersey, was used.

Selections of children for the camp were made from applications filed in the diabetes clinics of the various hospitals of Greater New York by interested diabetic children. There were a few acceptances from private physicians. The clinics and the private physicians guaranteed the applicants as suitable for camp. All applicants had to be ambulatory and

with no history of recent hospitalization. No child with infectious or contagious disease nor one who was a carrier was considered. Complicating chronic diseases, enuresis, or problem children were likewise refused. All children were checked immediately before leaving for camp to rule out any recently acquired infection.

The age limit varied somewhat in the four years. In 1936 and 1937 children from 7 to 13 years old were accepted, in 1938 older cases were allowed, the range being from 8 to 15, while in 1939, 7 years was the youngest and 15 the oldest.

Altogether, thirty-four out of the seventy-five Greater New York diabetes clinics sent children to the camp, the greatest representation occurring in 1939 when twenty-six different hospitals were on the list. As might be expected, Manhattan and Brooklyn boroughs had the largest quota. There were, in addition, 12 children who came from private sources.

### Object of Camp

The object of the camp was primarily recreational. It was meant to serve as a two-week fresh-air excursion for the needy diabetic children who were excluded from other camps because of their diabetes. It was not thought that the two-week stay would be long enough to be of any assistance in regulating the children. We took into consideration the fact that they came from many different clinics with widely different diets and insulin doses, that most of them had been followed for a long time in their respective clinics and were on what their advisers thought the best suited regimens, and that they were expected to return to the care of their own clinics after the two weeks. Hence the use of standardized diets with the necessary insulin readjust-



FIG 1 Older girls, 10-15 years of age



FIG 2 Younger boys, 8-12 years of age.

ments did not seem feasible under the circumstances

We adopted the policy that changes would be made only as the conditions demanded them. Those that had shocks had their insulin reduced, those that spilled sugar freely had their insulin raised, and the cases that were complaining of hunger got more food.

It was found, however, that instructions in urine examinations, insulin injections, and diet estimations could be conveniently carried on. The results were very favorable. Approximately 15 per cent of the children were unable on arrival to do a qualitative test for sugar with Benedict's reagent. These were given instructions and did their own tests before the first week was past. About 50 per cent of the campers on arrival could not inject their insulin. This occurred almost exclusively in the younger groups but after a few days of instruction every child that came to the camp was able to take care of itself. In the matter of teaching food values there was a marked interest shown by the children. The nurse dietitian in charge of the first camp introduced lectures on foods and food values and got such a warm response from the children that she continued it the next year. She felt that the second-year campers were just as enthusiastic as the first. In the third and fourth years the nurse in charge likewise found the children full of interest in the lectures. One child who had been living for a year without a single change in her diet was very happy when she learned how to make substitutions.

It was realized at the start that, under

the circumstances which the camp had to be run, research facilities were limited. The money was donated for the purpose of recreation and was expected to be spent for the same. As long as the limited funds created a waiting list, it was felt only essential expenses could be incurred. Furthermore, the fact that the camp site was rented each year, three out of four times in different locations, made a complete laboratory impracticable. It was possible, however, to obtain a certain amount of statistical data of interest from the charts. We have collected and analyzed these and are presenting our findings.

### Statistical Analysis of Camp Data

*Height*—The physique of the children on arrival was very satisfactory for those suffering from a chronic wasting disease. Using the Baldwin and Wood tables for height in 101 of the cases we found 62 normal, 21 above, and 18 below.

*Weight*—The initial weight showed normal figures for 77 of the 155 campers. Thirty-nine were above normal and 39 were below. After the two-week period, 61 showed no change, 62 had gained, and 32 had lost weight. The greatest individual loss was found to be four pounds and occurred in a child who was overweight. The greatest individual gain was seven pounds in a boy who was slightly underweight.

*Diets*—The total calories of the diets brought by the children from the clinics they attended began at 1,240 for a 7½-year-old boy. One diet of 910 calories, given to a 9-year-old girl by a private physician, was found too low to continue.

at the camp After three days the child was sent home for hospitalization because of acetone in the urine and a bad balance The largest was 2,750 for a boy of 15 who, incidentally, was the tallest and heaviest guest at the camp Thirty-eight of the 149 diets were above 2,000 calories, 93 were between 1,500 and 2,000, and 18 were below 1,500

The total calories were raised in 41 cases None were lowered The smallest raise was forty and the greatest was 814 calories There were two groups where the raise was marked, in those receiving less than 1,500 and in the older boys

On investigation the diets on arrival were found to be practically all in the high carbohydrate class with values ranging from 100 grams in a young girl to 320 in an older boy The protein ranged from 55 to 120 grams, while the fats were from 30 to 150 The carbohydrates were raised in forty children with increases from 10 to 60 grams The protein and fats were raised in a number of cases

*Insulin*—The *insulin dosage on arrival* also showed great variation Regular, protamine zinc, insulin (globin), and crystalline were represented Forty-nine of the arrivals were on regular insulin alone 30 in 1936, 10 in 1937, 4 in 1938, and 5 in 1939 Fifty-two were on protamine zinc insulin alone none in 1936, 20 in 1937, 16 in 1938, and the same number in 1939 One was on insulin (globin) alone with none on crystalline alone Forty-eight had combined regular and protamine zinc insulins none in 1936, 10 in 1937, 13 in 1938, and 25 in 1939 One in 1938 had regular and globin insulins combined, 1 in 1939 had protamine zinc and crystalline insulins combined, and 1 in the same year had regular and crystalline insulins together There were 2 children in 1936 who received no insulin

The *regular insulin* was given to 5 children in four doses in 1936 There was no four-dose case in any of the other three years In 1936, 10 children were given three doses a day, in 1937, 4, in 1938, none, and in 1939, 1 Two doses a day were given to 24 cases 14 in 1936,

3 in 1937, 4 in 1938, and 3 in 1939 The largest daily dose was 125 units in a girl of 9½ years in 1936, and the largest single dose was 45 units in the same individual before breakfast

The *protamine zinc insulin* was used alone 52 times in single doses The largest dose, 80 units, was given in 3 different instances 1, a female 11 years old, in 1937, 1, a female 14 years old, in 1938, and the third, also a female 14 years old, who came to the 1939 camp The average of the 52 cases was 38 units

*Insulin (globin)* was used once alone and was given in a single dose of 30 units *Crystalline insulin* was not used alone in any case.

*Combinations of insulin* were used in 52 cases The first year this occurred was in 1937 when 10 out of 40 or 25 per cent combined protamine zinc and regular insulins In 1938 there were 14 out of 36 or 39 per cent that used more than one type, 13 being combinations of protamine zinc insulin and regular insulin, while one combined insulin (globin) with regular insulin In 1939 the practice became more common with 26 out of 48 or 54 per cent of the cases using a combination In this year crystalline insulin was combined with protamine zinc insulin in 2 cases 1 male 13 years old taking 80 units of protamine zinc insulin and 116 units of crystalline zinc insulin in four doses

The average of the total doses of protamine zinc insulin and regular insulin in 1937 was thirty-seven units, with sixty-two units the highest in 1 case In 1938 the average was thirty-seven units with seventy units as the highest individual daily dose In 1939 there was a slight rise to forty-one while the highest individual daily dose rose to 80 units

Reasons were found to change the insulin dosage in 119 of the 155 cases Of these, 39 were raised and 80 were lowered In 1936, 1 was raised and 23 were lowered, in 1937, 8 were raised and 22 lowered, in 1938, 8 were raised and 25 lowered, and in 1939, 22 were raised and 14 lowered

*Insulin Reactions*—Reactions occurred 263 times, 5 being reported as severe. In 1936 there were 15, in 1937, 24, in 1938,



105, and in 1939, 119 and with 4 of these severe. The greatest number in one child occurred in a male 8 years old who had 14 during his two weeks' stay in 1938. Every one of the shocks was readily controlled by orange juice.

*Urinalyses*—In the four years there was a total of 8,170 tests for urinary sugar. This was an average of 53 for each child. The tests were made at 6 30 A M, 9 30 A M, 2 30 P M, and 7 00 P M. There were 2,677 or about 33 per cent that gave a blue reaction, 3,520 or 43 per cent were green, 784 or 10 per cent were yellow, 1,070 or 13 per cent were orange, and the rest, 119, or 1 per cent gave a red reaction.

The urine was tested for acetone in every specimen in 1936. After that, acetone tests were done only in those cases showing yellow or worse. There were 98 tests in 1937 with 70 positive. In 1938 there were 224 tests with 30 positive. In 1939 there were 428 tests done with 25 positive.

There were 3 irregularities that had considerable effect in 1939 on raising the number of high sugar content urines. One girl confessed after the first few days that she had been leaving urine out of the Benedict's when making her tests at home for some time so her mother would be satisfied. It took several days to get the red and yellow out of her urine. One of the older boys did the same thing at camp a number of times so he could get more to eat. Furthermore, an apple tree on the grounds with apples at the edible stage was known to be responsible for some of the bad tests among the older boys. In all fairness to the campers, we shall never again camp in an orchard.

*Complications*—There were a number of complications that occurred at the camp during the four years it was in operation. One case of homesickness, one of appendicitis, one catarrhal jaundice, one abscess of the lower leg, and one chronic pretibial ulcer. There were no sore throats or acute infectious diseases.

*Duration of Diabetes*—The duration of the diabetes was noted in 101 cases. The most recently acquired case was one of three months while the longest had been present for over nine years. There were

23 under one year in duration, 25 from one to two years, 12 from two to three years, 6 from six to seven years, 4 from seven to eight years, 1 from eight to nine years, and 4 from nine to ten years.

*Age at Onset*—The age at onset varied from less than 1 year to 14 years of age. The greatest number, 15, began their diabetes at 8 years of age. There were 11 that began at 9, and the same number at 10 years. There were 10 that began at 6 years of age, and 10 in the third year. At 7 and 12 the same number, 9, began their sickness. There were 6 that began at 13, 5 at 5, 4 at 11, 4 at 4, 4 at 2, 1 at 14, 1 at 1, and 1 less than 1 year of age when the diabetes was discovered.

### Summary

Summarizing, a summer camp for underprivileged diabetic children has been shown to be a definite need in New York City. Our study demonstrated that it can be a successful undertaking when supervised by those familiar with diabetic regimens. The camp met its primary purpose of providing a vacation in the country for a selected group of underprivileged diabetic children in Greater New York. That it was a success in the opinion of the children is proved by the fact that there were forty applications in 1939 filed by former campers.

Notwithstanding the short stay of the individual camper, additional advantages were noted. The general condition of a large proportion of the children was improved and a better diabetic balance was obtained in over two-thirds of them.

Furthermore, without detracting from the recreational status of the camp, instruction in urine testing, insulin injections, and food value estimations were given so that every child on leaving was able to test its own urine, inject its own insulin, and make simple substitutions in its diet.

From our collected data we find that the height and weight of the children on arrival at camp compared favorably with normal standards. Their admission diets expressed the general trends of the times—higher calorie and higher carbohydrate

content becoming more evident each year. The insulin dosages likewise showed changes parallel to the newer concepts of insulin administration. First, the regular insulin dosage was improved by less frequent injections and better distribution.

Later, protamine zinc insulin came into use with still fewer injections, and, finally, crystalline insulin made its appearance.

It was also noted that the frequency of

glycosuria increased progressively each year. The positive acetone tests, however, became less frequent in both an actual and a relative number. These changes were concomitant with the increase in the use of protamine zinc insulin and the increase in the carbohydrate content of the diet.

Finally, in conclusion, this study convinces us that the underprivileged diabetic child attending the free clinics of Greater New York is well treated.

### GINGERIZING PUBLIC HEALTH STUFF

"Go Down, Death! A Story of Facts and Figures," is the intriguing title of the annual report of the health officer of Mecosta and Osceola counties in Michigan. Dr. M. C. Igloe, of Big Rapids, mimeographed his report, in spiral binding, and sent a copy for review to the *J. A. M. A.*, which says the document "is an interesting effort to do for the health officer's annual report what Robert Benchley did for the 'Treasurer's Report, and other forms of Community Singing'." The reviewer goes on:

Dr. Igloe, with a sure sense of what will make people read things they ought to read but usually will not, starts out with a list of persons important to public health work in his territory, the state of Michigan, and the nation. Then he proceeds to beguile his readers with titles that tell little but promise much.

"Robert Manton Makes a Discovery" is the heading of Chapter I, dealing with the discovery by a citizen that a health department exists in the community and that it can do something about typhoid.

"They Were Once Considered Stupid" introduces the subject of health examinations of school children and the necessary corrections, appropriately assigned to the family doctor.

"You're Twenty-Five Years Too Late" tells about expectant mothers and what modern medicine, with the cooperation of health departments, can do for them.

"Swell, Then I Don't Have to Marry the Girl" is the approach to the syphilis problem and premarital examination.

"Thank God for Lipstick" tells about restaurant sanitation, dish washing, and inspection.

"Scarcely Anybody Ever Died" is aimed at the arguments of the old timers who think that public health work is an unnecessary frill and a needless expense.

"Trials and Tribulations" is a lament about the small share contributed locally for local public health work plus some timely remarks on the obligations of health departments to be as local as possible and to let medical treatment alone.

"Haves vs. Have-Nots" is neither political nor economic but epidemiologic and serologic treating of persons with communicable diseases, carriers, immunes, contacts, and epidemics.

"A Collector of Garbage Cans" is the all-too-realistic discussion of infected mouths and decaying teeth.

"Go Down, Death," the last and titular chapter, named from a Negro spiritual quoted from *God's Trombones* by James Weldon Johnson (Viking Press, 1927), is a summary and conclusion, with appropriate references to two health awards earned by the two-county health department in the rural contests by the Chamber of Commerce of the United States.

Practical souls who must have their statistics will find them succinctly and graphically presented in the appendix, where the casual reader can take them or let them alone. After reading the rest of the report, it is more likely that he will take them. This is a refreshing and interesting example of how annual reports, which are too often dull and dreary obligations, can actually be made stimulating and entertaining.

### WORLD'S FAIR VISIT COSTS

Physicians coming from any distance to visit New York's 1940 enlarged World's Fair are given the following data by the Official Rooming Bureau.

Hotels of the city can care for about 80,000 persons at prices between \$1.50 and \$3.00 per day, and about 170,000 additional visitors between \$3.00 and \$5.00 per day. In addition are registered and inspected private homes and room-

ing houses which will accommodate about 200,000 persons at \$1.00 and \$1.50 per day per person.

Typical budgets for visitors, submitted by the bureau, showed one person can spend two days at the Fair and one night in New York for as little as \$4.70 including room, meals, transportation and admissions to the Fair. For two persons the figure is \$9.40, and for two adults and a child, \$13.35.

# POSTCAVAL URETER

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IT IS evident, after an extensive survey of the literature, that postcaval ureter is an extremely rare condition. It has long been known to anatomists and embryologists. According to McClure and Huntington,<sup>1</sup> it is a fairly common finding in the cat. Hochstetter<sup>2</sup> in 1893 first described the condition in man. Shuh,<sup>3</sup> in 1935, reviewed the literature and reported an additional case. Including his case, there was a total of 16 cases at that time. Derbes and Dial<sup>4</sup> have since reported 2 cases, and Uebelhor,<sup>5</sup> Derbes and LaNasa,<sup>6</sup> Wren,<sup>7</sup> and May<sup>8</sup> reported 1 each. The case presented here brings the total to 23 and is the ninth to be found at operation.

## Case Report

E. R., male, aged 20, was admitted to the Syracuse Memorial Hospital, December 13, 1937, complaining of pain in the right lower quadrant, nausea, but no vomiting, day frequency of eight or nine times but no nocturia. He voided on admission and the urine was quite bloody. This was the first such attack. The remainder of his history was negative.

The physical examination was not of any interest except for the abdominal observations. There was marked tenderness in the lower right quadrant and the right lumbar region. The muscles were spastic but there was no rebound tenderness. Neither kidney was palpable. The urine showed a few white cells, hyaline casts, and a trace of albumin in addition to the blood. The blood count revealed 90 per cent hemoglobin, 5,400,000 red cells, 15,700 white cells with 81 per cent polymorphonuclears and 19 mononuclears. The temperature was 100.4 F rectally.

Cystoscopic examination, December 14, revealed the bladder to be normal except for slight congestion about the right ureteral orifice. Indigo-carmine appeared from the left ureteral orifice in four minutes in a deep blue concentration. There was no appearance from the right orifice in fifteen minutes. A No. 6 ureteral catheter was passed up the right ureter for a distance of 20 cm., where its further progress

was impeded. A right pyelo-ureterogram was done. The x-rays showed a lack of filling of the pelvis with a marked distortion and angulation of the ureter.

The young man left the hospital to spend the Christmas holidays with his family. He returned January 10, 1938, and he was operated upon January 12. The usual incision was made in the right kidney region. The kidney was firmly bound to the fatty capsule and was in an advanced stage of destruction. It was mobilized with difficulty. The ureter, instead of coursing laterally and downward, passed medially and beneath the inferior vena cava. It was very much dilated as was the pelvis. The ureter was firmly adherent to the vein and in its course downward was closely associated with the vein and aorta. It then passed over the vein to resume its normal course. Because of the severe kidney damage a nephrectomy was done. The postoperative course was uneventful, and he was discharged from the hospital January 28, 1938, two weeks from the day of operation. The pathologic examination of the specimen revealed acute and chronic pyelonephritis with marked hyaline degeneration of the tubular epithelium, hydronephrosis, and hydroureter.

## Embryology

The anomaly is not caused by any maldevelopment of the ureter but by faulty development of the inferior vena cava. For a description of the mechanism I refer you to articles by McClure, Lewis, Gladstone, and Randall and Campbell. It would be superfluous to repeat here what these men have already so thoroughly described. The anomaly occurs in four different forms.

*Type I*—There is unilateral persistence of the posterior cardinal vein (observed only on the right side), the postrenal segment of this vein forming the postcava. The great majority of cases fall in this group, including the case presented here.

*Type II*—Bilateral persistence of the postcardinal vein (bilateral retrocaval

*Read at the Annual Meeting of the Medical Society of the State of New York  
Syracuse, April 26, 1939*

ureter) Gladstone's<sup>9</sup> case belonged in this group

*Type III*—Unilateral persistence of the right posterior cardinal vein together with the postrenal portion of the right supracardinal giving a double vena cava, both on the right side, with the ureter passing through a ring formed by these two veins and their anastomoses. The cases of Wicks,<sup>10</sup> Von Gierke,<sup>11</sup> and Rotter<sup>12</sup> belonged to this group

*Type IV*—Unilateral persistence of the right posterior cardinal and left supracardinal veins so that we have a particular form of double postcava, one on each side with the ureter passing dorsally to the right vein. Rotter had a case belonging to this type

### Diagnosis

No case reported has been diagnosed preoperatively. This is not surprising in view of the fact that the anomaly is so rare that we do not sufficiently consider it as the possible cause of the ureteral obstruction present. After all, the symptoms presented and the x-ray findings are those of a ureteral obstruction. However, the x-ray findings, I believe, might almost be considered distinctive. At least the position of the ureter is so different from any other ureteral obstruction that we should at least suspect the possibility of this anomaly. I am in agreement with what Shih states "In the case reported, while the correct diagnosis was not made before operation, in retrospect it is difficult to explain the marked angulation of the ureter on the basis of one of the usual causes of ureteral kinking. Winding of the ureter around the inferior vena cava should be borne in mind when one encounters dislocation of the ureter to or beyond the midline." Randall and Campbell<sup>13</sup> state that a highly suggestive sign, which should aid in the preoperative diagnosis of this condition, is the peculiar position that the ureteral catheter bears to the vertebral column when lateral roentgenograms are taken. The ureter hugs the spine rather than falling away from it.

Derbes and Dial say "We are aware of no way by which a positive preoperative diagnosis can be made, though postcaval ureter should be kept in mind in all cases of hydronephrosis where the etiology is obscure, as the symptoms and sequelae plausibly would be similar to ureteral obstruction from other causes. Since the advent and wide adoption of the posterior approach in kidney operations, the surgeon is less likely to observe the course taken by the ureter. Therefore, we would like to suggest here that, if the anterior-posterior pyelogram shows the abdominal portion of the ureter diverted toward the midline, an additional film should be taken in the lateral position, then if the ureter is shown to course anterior to the shadow of the bodies of the vertebrae, we believe this to be suggestive of a postcaval ureter, especially in the absence of obliteration of one or more calices, hematuria, and palpable mass. In addition an examination of the diagrams of the previously reported cases shows that those presenting hydronephrosis revealed a typical falciform curve of the ureter at the point it encircled the vena cava."

### Treatment

The condition must be recognized early if the kidney is to be saved. To save the kidney the ureter must be severed, disconnected from the vena cava, and reanastomosed. Kimbrough<sup>14</sup> was the first to attempt and accomplish this successfully. More recently Uebelhor and May performed the same sort of operation and both succeeded. In cases where this may be impractical, a nephrectomy must be done.

### Summary

An additional case of postcaval ureter is reported. Twenty-two cases have been reported in the literature. The case presented is the twenty-third. Nine of these have been found at operation and the remainder at postmortem.

The preoperative diagnosis is discussed and the treatment outlined.

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## PROSTITUTION OF SCIENTIFIC SKILL

The miracles of science are not always used for the benefit of humanity—sometimes they merely fatten a profiteer's bank account. Thus the *Medical Record* notes that recently the *New Hampshire (State) Health News* discussed the "rich, nutritive" chocolate drinks that have recently become so highly recommended for children by those who manufacture them. In many of these drinks skimmed milk was used. Why?

The makers' replies were disingenuous. It was asserted that the use of whole milk would make the drink too "rich," perhaps indigestible. This is preposterous, for the removal of 1 or 2 per cent of readily digestible butterfat from milk could accomplish no such result, especially when it was replaced with chocolate syrup. But it was cheaper to use the syrup and sell the butterfat separately for profit!

The chocolate syrup used constantly tended to make the drink too rich and sweet. It increased the sugar intake. A vegetable fat deficient in vitamin A was used to replace vitamin-rich butterfat. In some cases starch and tapioca were actually used to thicken the drink and give it deceptive body. Furthermore the theobromine in chocolate and cocoa is now rated twice as toxic as the caffeine in coffee and should not be overfed to the young.

This tends to explain why the lag between the social and the physical and biologic sciences is

the most important problem confronting the world today. The progress of research in the laboratory has been astonishing. But we have no scientifically planned way of putting scientific knowledge to work most usefully. Part of this stems from the ivory-tower otherworldliness of the typical scientist who was content to do his work and let any who desired exploit the results. Examples appear daily.

The individuals who studied the intricacies of the so-called vitamin B complex were certainly serious scientists. But the individuals who threw a dash of vitamin B<sub>1</sub> into the formula of a nationally known female remedy for no reason known to rational therapy were simply after profits.

Certainly the laboratory workers who made the initial studies of such drugs as sulfanilamide and its derivatives, or of cinchophen, or even dinitrophenol, were serious and possibly humanitarian. But those who have exploited these drugs in patent medicine, causing health injury and death of their victims, were simply after profit.

One way of looking at it, then, our present society tends to put much scientific knowledge to work too quickly and in the wrong way. It is not always a lag that bothers us. It is much better to see to it that powerful drugs are studied most carefully in laboratory and clinic and proved harmless under ordinary conditions, than to have them exploited to the public at once and to the great detriment of the users.

## A QUICK-FINGERED "PILL CLINIC"

The *Westchester Medical Bulletin* under the heading "Speed and Efficiency Noted Under State Medical Plan," says

A taste of what medical care may become under governmental auspices is found in a dispatch by the International News Service under an Albany date line on January 20. This item, published in the *Journal American*, relates to an inspection report, sharply criticizing the existence of a "pill clinic" at the Rikers Island Penitentiary, issued by the State Commission of Correction.

According to the inspection report an inspector for the commission found that inmates reporting to sick-call clinics on the day of inspection, were handled at a rate of four or five a minute.

"Prisoners form two columns," the report said, "and as they pass a table they are given a prescription blank which they take to a physician who sits at a table near the entrance to the examination room of the clinic.

"As the prisoners pass in, they tell him what their ailment appears to be and he, without any examination whatever, writes a prescription, scribbling it so quickly that the nurse who hands out the pills from a tray which he has on a table could not in a number of instances read the prescription.

"In a few instances, where the inmate's complaints seem to warrant further examination, the doctor directed an examination which was conducted by another physician in the examination room.

"After the close of the clinic it was found by a count of the prescriptions handed out that one hundred twenty men had passed through within an hour." The inspector added a cryptic comment to the effect that "it appears that such treatment can be of little if any value, as it seems incredible that any physician can diagnose and prescribe at that rate."

# THE USE OF CALCIUM CHLORIDE IN THE TREATMENT OF CHILLS

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IN A previous communication<sup>1</sup> it was reported that the intravenous injection of calcium chloride solution had been found to bring about prompt termination of a majority of chills which occurred after the administration of anti-pneumococcic serum. Additional studies have been made on the effect of this agent, not only on chills following serum administration but also on those due to other causes, namely, malarial chills, those following blood transfusions, and the intravenous injection of typhoid vaccine. The present paper deals with the results that have been obtained.

The preparation of calcium chloride used was a 10 per cent aqueous solution. The usual quantity injected was 10 cc although as much as 20 cc has been given. The solution should be injected very slowly as it has been found that if given too rapidly the chill manifestations, although initially relieved, may recur.

In all patients treated with calcium, the chills at the time of treatment were at least of moderate severity, characterized by tremor of the extremities, generalized spasticity of the skeletal muscles, cyanosis, chattering of the teeth, and a sensation of coldness. In the cases reported as having been completely relieved, the effect, indicated by relaxation of muscular spasm, cessation of tremor, and disappearance of symptoms, usually appeared within fifteen seconds of the beginning of the injection. Patients usually volunteered the information that they felt warm and comfortable.

*Chills Following Administration of Anti-pneumococcic Serum*—Twenty-one patients with lobar pneumonia have been treated with calcium chloride during chills occurring after serum administration. In 13 cases there was complete relief

In the remaining 8 cases there was incomplete or no relief.

*Chills Occurring in Malaria*—Three patients suffering from malaria (induced in the treatment of neurosyphilis) were available for study. In this group calcium chloride was administered on five occasions. Immediate relief of the chill was obtained in all five instances, but in two instances the injection caused nausea and had to be discontinued, after which the chill recurred.

*Chill Reactions to Blood Transfusion*—Calcium chloride was administered during this type of chill on two occasions, both in the same patient. In one instance there was immediate termination of the chill, while in the second there was no observable effect. No explanation for these dissimilar results was apparent.

*Chills Following Intravenous Injection of Typhoid Vaccine*—Observations were made on 2 patients who were given typhoid vaccine intravenously in the treatment of arthritis. Calcium chloride was administered during seven chills occurring in these 2 patients. In three instances there was complete relief, in two there was marked diminution in the intensity of the chills, and in two there was no apparent effect.

*Effect on Body Temperature*—Termination of the chill by calcium chloride did not appear to have any effect on the subsequent elevation of body temperature. Continuous records of the rectal temperatures of patients during chills following intravenous injection of typhoid vaccine were obtained by means of an apparatus designed by Dr. J. Murray Steele.<sup>2</sup> A thermocouple inserted into the rectum is connected to a galvanometer. A beam of light is deflected by the galvanometer onto a slowly moving strip of photographic film, thus providing a

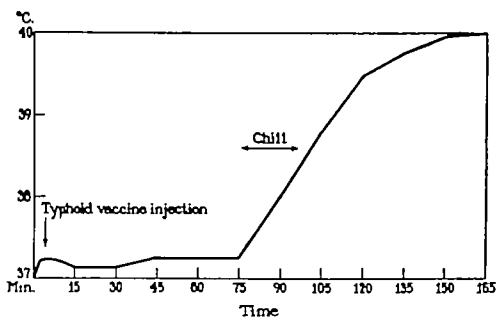


FIG 1 Course of the rectal temperature following intravenous injection of typhoid vaccine

continuous record of variations in the rectal temperature. Figs 1 and 2 are diagrammatic representations of two such tracings. In both cases the chill occurred about one hour and fifteen minutes after the intravenous administration of typhoid vaccine. It will be noted that the rectal temperature began to rise at about the time of onset of the chill and continued to rise for almost one hour after the chill had ceased. No calcium chloride was administered during the period in which Fig 1 was made. On the other hand Fig 2 illustrates an instance in which the administration of calcium chloride brought about prompt relief of the chill. As in the other cases cited, irrespective of the causative factor, there was no significant difference in temperature response whether the chill was allowed to run its natural course or was aborted by the administration of calcium chloride.

### Discussion

Reports of toxic effect from the therapeutic use of calcium chloride are uncommon. It probably should not be given intravenously to patients who are receiving digitalis because calcium and digitalis have an additive effect.<sup>3,4,5</sup> Intravenous injections must be made carefully since extravasation of calcium chlo-

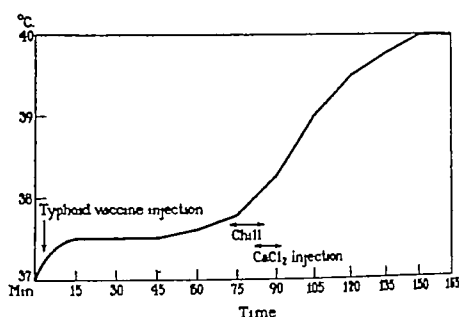


FIG 2 Course of the rectal temperature following intravenous injection of typhoid vaccine. The chill was terminated abruptly by injection of calcium chloride.

ride into the subcutaneous tissues may cause necrosis. The only untoward effect encountered during these studies was the occasional occurrence of nausea, which, in 3 cases was severe enough to result in vomiting. The sensation of nausea usually came on rather suddenly and occurred most frequently in the malaria patients, who were often somewhat nauseated as a consequence of the malaria itself. The result to be obtained in individual cases was not easily predictable, although in general the beneficial effect of calcium chloride was found to be less marked on the severe chills than on those of only moderate severity.

### Summary

Intravenous injection of calcium chloride has been found in a majority of cases to terminate chills due to various causes. Relief of the chill appeared to have no effect on the subsequent elevation of the body temperature.

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### NATIONAL GASTROENTEROLOGICAL ASSOCIATION

The Fifth Annual Convention of the National Gastroenterological Association will be held on June 4, 5, and 6, 1940, at the Hotel Roosevelt

Madison Avenue and Forty-fifth Street, New York City. A very interesting program is assured.

# PATHOLOGY OF EXPERIMENTALLY PRODUCED PULMONARY TUBERCULOSIS IN THE RABBIT

## The Effect of Prophylactic Vaccination

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THE pathogenesis of human tuberculosis is difficult to elicit because it is impossible to determine (1) the date of the first contact with the tubercle bacillus, (2) the quantity of bacilli inhaled, or (3) the constitution (nature of the soil) of the host. Any interpretation of the disease depends upon studies of necropsies, which in large part represent the end stage of a disease of long duration. Certain deductions made from the study of such material have come to be accepted as fact. Calcified parenchymal foci with similar lesions in the lymph nodes draining the area are now considered as evidence of first infections and are spoken of as "the primary complex of Ghon." A firm, well-circumscribed lesion without calcification is spoken of as the "productive type" and carries with it the impression that the whole lesion is entirely the result of the reaction of the local tissue. If the lesion is not circumscribed and is soft, the term "exudative type" is used, signifying that the lesion is, in large part, produced by the immigration of inflammatory exudate, cells, and fluid from the circulating blood. The macroscopic appearance of the pathology in adult lungs presents a picture sufficiently different from that in children so that an adult or reinfection type of disease has gained acceptance. With the introduction of the term "reinfection" and the knowledge that a "first" infection sensitizes the individual to tuberculin, the allergic or sensitized state has come to be regarded as a prime cause for the difference between the so-called "childhood" and "adult type" of disease. Another

commonly accepted idea is that cavitation of a tuberculous lesion occurs as a result of reinfection upon an allergic soil.

In an attempt to visualize the probable pathology in tuberculous patients most of the above pathologic concepts have been adopted by the clinician. This is especially true when it comes to an interpretation of the pulmonary shadows observed in roentgenograms, for roentgenologic findings have assumed great importance since a considerable number of tuberculous patients fail to exhibit any significant physical signs or clinical symptoms. A perusal of the literature on the clinical aspects of tuberculosis readily reveals how widely accepted are the pathologic concepts noted here.

While many studies have been conducted on experimentally infected animals of different types, attention has not been directed to the pathogenesis of pulmonary tuberculosis under different conditions. In general, the researches were undertaken to determine the pathogenicity of the tubercle bacillus, the mode and extent of spread of the infection from the site of inoculation, the presence of sensitization and the effect of desensitization, and the effect of vaccination in relation to survival time, extent, and bacillary content of the tuberculous lesions. The experimental data presented in this paper analyzes the conditions observed in the lung parenchyma of rabbits inoculated intravenously with tubercle bacilli. A comparative study of the pathogenesis of primary infection with bacilli of high and low pathogenicity and of reinfection with bacilli of high



pathogenicity upon a soil sensitized by a primary infection with bacilli of low pathogenicity is reported

Three groups of rabbits, each consisting of 20 animals of approximately the same age, were treated as follows Group A—10 mg of living tubercle bacilli of low pathogenicity (BCG), Group B—0.05 mg of living bacilli of high pathogenicity (Bovine), Group C—the pulmonary tissue had been sensitized by a single inoculation of 10 mg of bacilli of low pathogenicity and six months later a reinfection was given by the inoculation of 0.05 mg of living bacilli of high pathogenicity The three groups were all inoculated on the same date, and, at fairly frequent intervals thereafter, animals were killed in order that the pathogenesis of the pulmonary lesions could be determined The groups will be spoken of as A, B, or C

In A, 3 of the animals died from acute nontuberculous bronchopneumonia, and the remainder showed no ill effects from their inoculation In B, death from the tuberculous infection occurred as early as the fifth week and all of the animals were dead by the eighth week In C, the first tuberculous death was at four months and the last survivor died in seven months One animal of this group died from spontaneous pneumothorax The pathologic observations of this serial study will be discussed in general terms as between the different groups instead of attempting to give a detailed analysis of the individual animals

Four days after inoculation, microscopic lesions were present in all groups The largest number were in A, a reflection of the greater dosage The individual foci presented a similar picture in all groups—a small irregular area of damaged alveolar walls within which monocytes and neutrophils had accumulated No tubercle bacilli could be demonstrated even after prolonged search None of the lesions presented a histopathologic picture that would suggest that they were tuberculous in nature

At two weeks small lesions could be seen on macroscopic examination of the

lungs in each group They were most numerous in A, again a reflection of the heavier seeding of the tissue Lesions were fairly evenly distributed in all parts of the parenchyma Microscopic study showed that the cellular content, largely monocytes, was much the same in A and C and that in B, neutrophils were more abundant than in A and C In size the foci were smallest in A Small areas of caseation were present in B and C only All of these lesions were, in effect, small spots of pneumonia in that the alveoli adjacent to the damaged alveolar walls contained a considerable number of the cells of inflammation The increase in size of the lesions appeared to be due entirely to emigration of cells from the blood stream, as no evidence of hyperplasia of the local tissue was demonstrable Bacilli were scarce in the foci in A, demonstrable only in the small caseous areas in C, and easily found not only in the caseous areas but in other portions of the lesions in B

At one month, macroscopic examination showed the tuberculous lesions smallest in A, largest in B, and intermediate in size in C An even distribution of lesions within the lung parenchyma was noted Microscopic examination showed that the lesions in B and C were much more spreading in type than in A Large caseous foci and numerous ulcerative lesions of the bronchial tree were present in B, smaller areas of caseation and no ulceration in C, and no caseation in A The outstanding difference in the cellular content of the lesions was the greater number of neutrophils in B, these cells being predominant in the early caseating and ulcerating foci Tubercle bacilli were easily demonstrated in the lesions of all groups but were much more numerous and widespread in B

Between the fifth and eighth weeks all of the animals remaining in B died from the infection The macroscopic and microscopic pathology differed from the earlier phases only in that a greater volume of the lung tissue was involved and an increase in the amount of inflammatory exudate was present. In no

instance was evidence found of regression of the disease or of a reparative process of a lesion. Bacilli in large numbers were present in the ulcerative lesions and in the inflammatory exudate within the bronchi. They were scarce in many of the old caseous foci.

In A the volume of exudate increased up to six weeks and then gradually regressed so that by the end of the seventh month only an occasional lesion was left. Textbook tubercles were numerous at two months. As the lesions regressed more and more toward resolution or toward fibrosis, the lymphocyte became the dominant cell type. An occasional tubercle with a focus of caseation was found in the lesions present after three months, and at seven months an occasional caseous tubercle showed calcification. Tubercle bacilli were easily demonstrated in the majority of lesions at six weeks, but at a later date they could be found only in the tubercles with caseation. The calcified tubercles revealed no bacilli.

Group C developed a macroscopic pathology quite different from A and B. As time elapsed the tuberculous lesions regressed to invisibility in areas of considerable size in the deeper and ventral lung parenchyma. On the other hand lesions progressed even to cavitation in the dorsal parenchyma, especially toward the caudal portion of the lung, and pleural adhesions over these latter lesions were common. Microscopic studies of numerous areas of the lung showed a wide variety of lesions. Textbook tubercles, focal accumulation of lymphocytes, scars, and an occasional calcified caseous tubercle were observed in those areas where the disease had regressed. In these areas no bacilli could be demonstrated. The progressive lesions in the dorsal and caudal portion of the lung showed large areas of caseation that in small portions were partly calcified. Peripheral to the caseation was a more or less successful encapsulation by fibrosis with a zone of monocytes, lymphocytes, and occasional giant cells bordering on the caseous material. Partial liquefaction

of the caseous material was evident in places, and if such areas connected with a bronchus, both neutrophils and tubercle bacilli were abundant. In some instances bronchial discharge of the softened caseous material was sufficiently great to warrant the designation of cavity formation. The only areas in any of these large lesions where tubercle bacilli could be readily demonstrated were those in connection with bronchi, and in these places large numbers of organisms were always present.

A survey of the data presented above shows that we have observed as wide a variety of lesions in this experiment as has been described for human pulmonary tuberculosis: "productive" type, "exudative" type, bronchiogenic spreads, cavitation, calcification, fibrosis, and pleural adhesions. Also the characteristics of the bacillus (low or high pathogenicity), the amount of bacilli used, the date of the infection, the approximate age of the lesions, and the nature of the soil (virgin or sensitized) are all known. With such data at hand it would seem reasonable that a fairly accurate idea of the pathogenesis of the disease could be determined and that the influence of a sensitized tissue upon a reinfection could be evaluated.

All of the tuberculous lesions observed in this study were in large part "exudative" in type. That is the neutrophils, monocytes, lymphocytes, and fluid were "exuded" from the blood stream the same as in any inflammatory process. The only evidence that the local lung parenchyma participated in the disease was the presence of damaged alveolar walls or an increase of fibroblastic tissue in the repair or encapsulation of lesions. While textbook tubercles, the classic example of a "productive" lesion, were frequently observed, they were never seen in the early development of the disease. Instead they represented a reparative or healing stage of a lesion. Such tubercles were not once observed in Group B and only in the later phases of the disease in Groups A and C.

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pathogenicity upon a soil sensitized by a primary infection with bacilli of low pathogenicity is reported

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At two weeks small lesions could be seen on macroscopic examination of the

lungs in each group. They were most numerous in A, again a reflection of the heavier seeding of the tissue. Lesions were fairly evenly distributed in all parts of the parenchyma. Microscopic study showed that the cellular content, largely monocytes, was much the same in A and C and that in B, neutrophils were more abundant than in A and C. In size the foci were smallest in A. Small areas of caseation were present in B and C only. All of these lesions were, in effect, small spots of pneumonia in that the alveoli adjacent to the damaged alveolar walls contained a considerable number of the cells of inflammation. The increase in size of the lesions appeared to be due entirely to emigration of cells from the blood stream, as no evidence of hyperplasia of the local tissue was demonstrable. Bacilli were scarce in the foci in A, demonstrable only in the small caseous areas in C, and easily found not only in the caseous areas but in other portions of the lesions in B.

At one month, macroscopic examination showed the tuberculous lesions smallest in A, largest in B, and intermediate in size in C. An even distribution of lesions within the lung parenchyma was noted. Microscopic examination showed that the lesions in B and C were much more spreading in type than in A. Large caseous foci and numerous ulcerative lesions of the bronchial tree were present in B, smaller areas of caseation and no ulceration in C, and no caseation in A. The outstanding difference in the cellular content of the lesions was the greater number of neutrophils in B, these cells being predominant in the early caseating and ulcerating foci. Tubercle bacilli were easily demonstrated in the lesions of all groups but were much more numerous and widespread in B.

Between the fifth and eighth weeks all of the animals remaining in B died from the infection. The macroscopic and microscopic pathology differed from the earlier phases only in that a greater volume of the lung tissue was involved and an increase in the amount of inflammatory exudate was present. In no

a considerable amount of living tubercle bacilli of low pathogenicity. Later this soil was similarly reseeded with a much smaller amount of living bacilli of high pathogenicity. Time demonstrated that the fate of a tuberculous lesion depended, in large part, upon where it happened to be located in this conditioned or sensitized soil. When tubercle bacilli of high pathogenicity can be successfully combated in some area of a sensitized organ, progressive lesions in other portions of the same organ would indicate that the bacilli thrive in spite of, rather than because of, the conditioned soil. This situation would seem to render untenable the concept that tuberculin sensitization makes a tissue more vulnerable to a tuberculous infection. In other experiments we have been able to obtain lungs indistinguishable from the picture presented by the lungs in Group C in a primary infection of long duration. In other words, if a certain balance between the resistance of the host and the pathogenicity and dosage of the bacillus is obtained, a type of pathology that is indistinguishable from that of a reinfection can be produced in a primary infection. The concept of a reinfection type of tuberculosis therefore becomes meaningless.

The data presented here demonstrates that for some reason the higher portions of the lung parenchyma in the rabbit are more vulnerable to tuberculous infection than are the inner and more dependent areas. Clinical and necropsy studies of human beings reveal this same peculiarity, more noticeable perhaps in adults. If, by chance, tubercle bacilli lodge in the upper portions of the parenchyma of any lobe of a lung, the stage is set for the possible development of a chronically progressive disease. How the bacillus arrived at this destination would seem to be of little importance. No part of the lung parenchyma is capable of successfully combating a massive infection which may be delivered through bronchiogenic spreading from a cavitating lesion. But clinical and necropsy studies reveal a remarkable ability of the more de-

pendent portions of the lung parenchyma to remain free from disease and to overcome a considerable amount of infection. With the data we have presented as a background we suggest that greater attention be directed to the location of tuberculous lesions in the lobes of the lungs. Of considerably less importance is the consideration of the age of the infected individual and whether the infection is a first or a fiftieth infection. A sensitized soil is in all probability a friend rather than a foe in the fight against tuberculous infection.

### Summary

A comparative study of the pathogenesis of experimentally produced pulmonary tuberculosis in the rabbit is presented wherein a primary infection with bacilli of low or high pathogenicity or a reinfection with bacilli of high pathogenicity was produced. The data obtained from this study is considered in relation to certain concepts of the pathogenesis of human pulmonary tuberculosis. The following concepts are presented for consideration.

1. All tuberculous lesions of the pulmonary parenchyma are "exudative" or inflammatory in type. They are all foci of pneumonia—at first microscopic, later macroscopic in size.

2. Calcification may occur either in primary or reinfection lesions. This phenomenon occurs in the late reparative stages of a tuberculous lesion with a walled-off caseous focus and is a sign of a hard-won victory. It probably has no other significance.

3. Both primary and reinfection tuberculous lesions may regress to complete resorption, to a fibrous scar, or to calcification.

4. A sensitized soil is a friend rather than a foe in the fight against tuberculous infection. Chronically progressive pulmonary tuberculosis occurs in spite of, rather than because of sensitization of the tissue. The site of localization of tubercle bacilli within the pulmonary parenchyma appears to have a direct bearing upon the fate of the infection.

that they consisted of a "core" of damaged alveolar walls, with a spilling over of the inflammatory exudate into the adjacent alveoli as its volume increased. A lesion of macroscopic proportions, regardless of its size, texture, or general appearance, represented an area of lung parenchyma, the alveolar spaces of which were more or less gorged with the products of inflammation. The caseous areas were a combination of dead lung parenchyma and dead inflammatory exudate. The phenomenon of cavitation was dependent on the liquefaction of the caseous debris and its discharge through the bronchial tree. The process is similar to the pathogenesis of a staphylococcic "boil," except that in the staphylococcic lesion the development is a matter of days, whereas in tuberculosis it is a matter of weeks or months. This difference would seem to be due to the nature of the infectious agent and to the type of chemical damage it causes rather than to any difference in the cell types that participate in the inflammatory process.

Calcification appears to be nature's way of rendering innocuous certain isolated caseous areas. Perhaps because of the chemical products in the area, the debris is more easily changed to hard soap than it is resorbed. Calcification was observed in both primary and reinfection lesions, and it is quite probable that this is also true in human tuberculosis. A calcified residuum of a tuberculous lesion indicates only that the host had considerable difficulty in defeating the tubercle bacillus.

The foregoing discussion brings up a consideration of the significance of the primary complex of Ghon. The data cited above proves that lesions of reinfection as well as of primary infection may regress to complete resorption or to a residual fibrous scar. It is well known that a considerable proportion of human beings who are tuberculin-sensitive reveal no evidence, by roentgenogram, of a primary complex. While impossible of proof from human material, our experimental data would seem to suggest that, in a large number of persons,

tuberculous lesions, whether primary or reinfection, end in resorption rather than in calcification. When the primary complex of Ghon is demonstrable, it indicates that the individual had a difficult task in conquering the infection. Probably no other significance can be attached to it.

From the histopathology of individual tuberculous lesions it was found impossible to distinguish between Groups A, B, and C during the first week or ten days after their inoculation. As further time elapsed, Group A could easily be differentiated from the other groups by the macroscopic appearance of the lungs and by the histopathology and bacillary content of the lesions. Group B could be distinguished from Group C during the first month by the larger number of tubercle bacilli in the lesions. Later the uniform progression of the lesions and the presence of large caseous foci and areas of ulceration into the bronchial tree in lesions from all portions of the lung parenchyma also became distinctive of Group B.

Group C (reinfection) suggested a hybridization of A and B. Lesions that were indistinguishable from those in A and others that were indistinguishable from those in B were demonstrable. Correlation of the macroscopic and microscopic pathology demonstrated that no distinction between the tuberculous foci in various areas of the lung parenchyma could be made during the first month of the infection. Later foci in the deeper and more ventral portions of the lung regressed to complete resorption, scar formation, or calcification, while lesions located in the more superficial dorsal and caudal areas progressed even to cavitation. Such lungs have a close resemblance to the so-called adult or reinfection type of human pulmonary tuberculosis, with the exception that the progressive lesions tended to be localized in the caudal rather than the cephalic part of the lung lobes.

The soil was conditioned or sensitized in Group C by a liberal seeding of the capillary bed of the pulmonary parenchyma by the intravenous inoculation of

TABLE 1—APPROXIMATE INCIDENCE OF VARIOUS DISORDERS IN WOMEN ADMITTED AS TOXEMIA OF PREGNANCY

	Percentage
Essential hypertension	60
Chronic nephritis (including glomerulonephritis, pyelonephritis, and polycystic kidneys)	20
Acute nephritis (usually pyelonephritis)	5
Water retention toxemia	15

of water exchange between the blood plasma and the tissue spaces. He indicated that the colloid osmotic pressure exerted by the plasma proteins was the force that prevented the intracapillary hydrostatic pressure from filtering water out of the blood. If one could perfuse an intact human being with a protein free plasma at normal intracapillary pressure, it would require approximately 10 seconds to filter out the entire water content of the plasma through the 6,300 square meters of surface presented by the capillaries of an average sized man. However, the problems of water metabolism involve many other factors. At any level of plasma proteins, the administration of a few grams or more of sodium will cause water retention, and the withdrawal of sodium from the diet will cause water to be lost. This is true both for man and laboratory animals. It is only the magnitude of the change that varies inversely with the level of the plasma protein osmotic pressure. Furthermore sodium, although the most important substance, is but one of the electrolytes involved in water exchange. An increased potassium intake favors sodium and water excretion, and a low potassium intake probably favors water and sodium retention. The administration of any of the salts that result in an excess of negative ions in the body, such as ammonium chloride and nitrate, calcium chloride, or magnesium sulfate, cause sodium and water to be excreted.

The oral administration, in a large quantity, of a freely diffusible organic solute such as urea, other factors being kept constant, will result in a loss of water and salt as well as the intravenous administration of hypertonic glucose or a nonmetabolizable sugar such as sucrose.

A restricted intake of water tends to cause a loss of body sodium and other

salts in order to prevent concentration of the electrolytes in the body fluids. A great increase in water ingestion without an increase in electrolyte intake may actually flush out sufficient salts in the urine to result in subsequent depletion of the body fluids and later dehydration.

Other factors being kept constant, the loss of salt and water in increased sweating or diarrhea may result in dehydration.

Anemia, for some unknown reason, is conducive to water retention as is also increased capillary permeability such as is encountered in acute glomerulonephritis. Any process that raises the intracapillary pressure, such as congestive heart failure or venous obstruction, favors water retention. Changes in the dietary constituents, as for example the amount of carbohydrate ingested, may influence water exchange. Primary renal failure is but rarely involved in the causation of edema, which most generally depends on "pre-renal deviation." It is thus apparent that water exchange is a complex phenomenon dependent on many factors, any one of which can be studied provided the remainder are kept constant.

In the nonpregnant subject or animal, as noted above, the magnitude of the water gain or loss, following an alteration in electrolyte intake, varies inversely with the level of the osmotic pressure exerted by the plasma proteins, the albumin fraction being four times as osmotically active as the globulin fraction. The determination of the total plasma protein is therefore of no value unless the separate fractions are measured. Nor are these determinations of value unless done by an accurate method by an experienced and competent individual. Refractometric and specific gravity determinations are useless as a means of estimating the colloid osmotic pressure of the plasma proteins.

### Water Metabolism in the Last Trimester of Pregnancy

The following observations were all made in the last trimester of gestation upon women who were in the hospital but

# THE TOXEMIAS OF PREGNANCY

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THE term "toxemia of pregnancy" has served for generations and still serves as a diagnostic waste basket to cloak ignorance. Medical prepossession with mysterious and unidentified "toxins" has prevented intelligent study of the various disorders combined under this misnomer. However, writers have wisely refrained from defining what toxemia is. To each, the word carries certain connotations, rarely does it mean quite the same thing to any two. The late John Whitridge Williams<sup>1</sup> pointed out years ago that totally different pathologic conditions may be accompanied by identical clinical manifestations and, further, that classification could not be based upon the occurrence of urinary abnormalities, hypertension, coma, or convulsions. Peters<sup>2</sup> and others more recently have shown that, at necropsy, patients with identical clinical syndromes may show widely varying or no significant pathologic lesions. There remains, however, one simple method of dividing this heterogeneous group of "toxemic" women into at least two main classes, and that is by studying the state of affairs antecedent and subsequent to the "toxemia." Such study reveals the fact that about 80 per cent of the women designated as having "toxemia" actually have chronic vascular or renal disease before and after the gravid state, and an additional 5 per cent have such disease in acute form (Table 1). However, the remaining 15 per cent of such women have had no demonstrable abnormality before pregnancy or after the pregnancy in which abnormalities called "toxemia" occurred. Further, these women under proper management will have subsequent uneventful pregnancies. It is this group for which the designation "water-

retention toxemia" seems to be appropriate.

## Clinical Aspects

The clinical picture manifested by these women is characterized, first, by the absence of apparent abnormalities before gestation and after the puerperium and, second, by a fairly typical course. In the last trimester of pregnancy a rapid gain in weight, generally but not always manifest as edema, is followed by a rising blood pressure, albuminuria, and later symptoms such as headache, visual disturbances, vertigo, epigastric pain, convulsions, and coma. The urine is generally of high specific gravity and does not contain red blood cells or white blood cells until the disorder has existed for some days at least. The nonprotein nitrogen and the icteric index are always normal or lower than normal until the condition is far advanced. The retinal arteries *never* show the changes that are observed so commonly in women with chronic vascular or renal disease. It is to be emphasized that these cases comprise only one-sixth of the total so-called "toxemias," and that the typical clinical course is not necessarily diagnostic. Other conditions may simulate it closely.

## Water Metabolism

Formerly, water retention in pregnancy was considered of "toxic" origin, later the pituitary antidiuretic hormone became the culprit. Now the fashion is to incriminate other newer hormones. Evidence for these indictments or for changes in the upper or lower urinary tract being primarily responsible is lacking.

Almost half a century has elapsed since Starling<sup>3</sup> first postulated the mechanism

*Read by invitation at the Annual Meeting of the Medical Society of the State of New York, Syracuse, April 26, 1939*

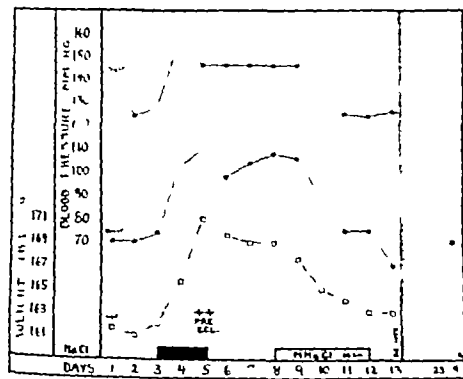


FIG 3 The effect of sodium administration in a pregnant woman with a plasma protein osmotic pressure of 193 mm  $H_2O$ . Note the development of acute arterial hypertension and pre-eclamptic symptoms. Generalized edema appeared. No remission occurred during three days after sodium was stopped. The administration of 16 Gm of ammonium chloride daily resulted in prompt diuresis and the return of the arterial blood pressure to normal. Symptoms and edema disappeared. Note normal blood pressure after the puerperium.

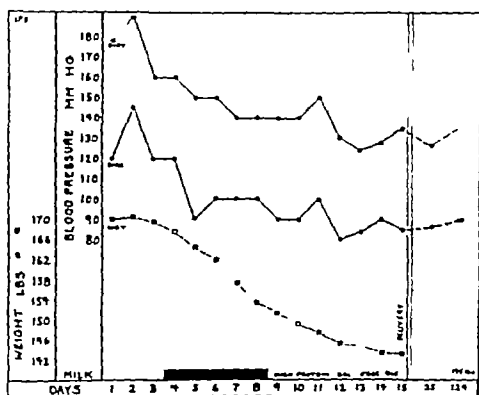


FIG 4 Marked fall in blood pressure during low sodium regimen in moderately severe case of water-retention "toxemia" of pregnancy. Note the stationary weight and blood pressure during the control period before the milk regimen was commenced, and note that the weight remained reduced and the blood pressure normal while the patient received a diet containing 150 Gm protein and essentially no salt, postpartum the blood pressure remained normal. Plasma protein osmotic pressure was 175 mm  $H_2O$ .

### The Effect of Changes in Water Balance on Blood Pressure

What is the effect of changes in water balance on arterial hypertension, albuminuria, and pre-eclamptic symptoms? First there were studied 10 women, in the last trimester of gestation, who had normal plasma proteins and either normal blood pressures or known pre-existing "essential hypertension." The administration of the stated amount of sodium resulted in small increments of water retention but was without effect on the arterial blood pressure, urine, or symptoms if any existed.

In contrast to these observations those made on 10 patients with low plasma proteins are illustrated by a characteristic case in Fig 3. In these patients, the administration of sodium resulted in significant gains in weight, the occurrence of obvious edema, hypertension, and increasing albuminuria, and in three instances such pre-eclamptic symptoms as headache, visual disturbance, vertigo, and epigastric pain. Further, when retained water could be eliminated, all these manifestations subsided.

This set of observations represents, as far as I am aware, the first successful

attempt to produce "toxemia" of pregnancy. However, I am sure that many obstetricians can recall patients whose acutely developing "toxemia" followed on a period of heartburn (self-treated with baking soda) or after a fine shore dinner rich in sodium chloride. I have personally observed 11 patients who self-treated their heartburn with bicarbonate of soda, citrocarbonate, or with a patent medicine rich in alkaline salts, only to develop edema, hypertension, albuminuria, and, in a few instances, convulsions. In 1 patient no other treatment than the omission of the self-administered soda resulted in complete remission of all signs and symptoms.

The converse of these observations has also been carried out. Twenty-five women in the last trimester of pregnancy suffering from essential hypertension or chronic nephritis (including 1 case of congenital polycystic kidneys) have been deprived of sodium by means of the skimmed milk regimen noted above. No beneficial results were observed.

In contrast to such data are the results obtained in a similar-sized group of women with acute "toxemia" conforming to the



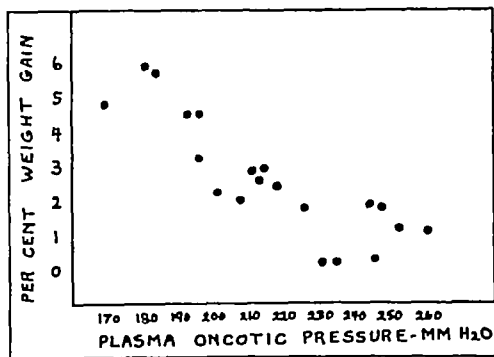


FIG 1 The percentage of body weight gain in three days plotted against the osmotic pressure of the plasma proteins in 20 women, in the last trimester of pregnancy, who received 6.3 Gm of sodium daily in addition to that taken in or on their food

not confined to bed. They comprised both normal pregnant women and those with various types of "toxemia." None had acute glomerulonephritis, congestive heart failure, or anemia. No observations were begun until after the women had stabilized their water balances over a period of at least three days on the ward, during which time salt and water were allowed freely but no saline cathartics or bicarbonate of soda were given. Twenty of the women were then given 6.3 Gm of sodium daily, either as 16 Gm of sodium chloride or 23 Gm of sodium bicarbonate, in addition to the salt in or on their food.

Water was allowed freely. Each of these women retained water as illustrated by their weight changes that are plotted (Fig 1) against their respective plasma protein osmotic pressures. The excellent linear correlation excludes the necessity of involving hormones, hydronephroses, or toxins to explain why some women gained 10 or more pounds and others but 1 or 2. The limiting factor clearly appears to be the plasma protein osmotic pressure.

The converse of these observations was then carried out. Thirty-seven women were deprived of sodium. This was most simply accomplished by arranging that their food consisted each day of only 1,500 cc of skimmed milk. Water was allowed freely. Fifteen hundred cc

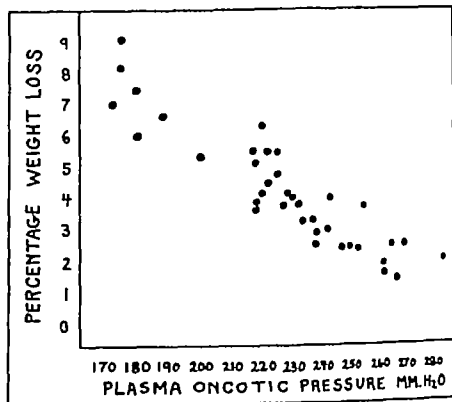


FIG 2 The percentage of body weight loss in five days, plotted as in Fig 1, in 37 women in the last trimester of pregnancy, who received 1,500 cc of skimmed milk daily but no other food. Water was allowed freely.

of skimmed milk contains but 0.5 Gm of sodium and 2.0 Gm each of potassium and calcium. Each of these women lost weight as a result of moderate to extreme water diuresis. At most, 1 to 2 per cent of the weight loss can be accounted for by an insufficient caloric intake. The amount lost in five days, plotted again as the percentage of original body weight, varied in linear correlation inversely with the plasma protein osmotic pressure (Fig 2). Those women who had visible edema (about half of the group) lost all trace of this. Again there is no need of invoking toxins, hormones, or renal disturbances to explain these changes in water metabolism.

It is thus apparent that in these cases of both normal and "toxic" pregnancy, in the absence of severe anemia, congestive heart failure, and acute glomerulonephritis, water retention depends essentially on the level of the plasma protein osmotic pressure and the electrolyte intake. These observations must not be construed as meaning that every instance of water retention in pregnancy is due to alterations in these two factors, nor must one factor be considered of greater importance than the other. However, it may be stated that water retention in pregnancy does not differ from water retention in the nonpregnant.

## Discussion

Sixty-five years ago Rosenstein stated his belief that eclampsia resulted from the effusion of serum out of a "too watery" blood. Many methods of treatment of "toxemia" that have met with more or less success have knowingly or unknowingly been measures to eliminate water retention. The use of purgation with magnesium sulfate to rid the body of "toxins" is a double means of ridding the body of water—first, by direct loss from the bowel, second, by the acidifying diuretic action of the absorbed sulfate ion. The adherents of the belief that "toxemia" arose from hypocalcemia have administered calcium chloride, an excellent acidifying diuretic. Fluid restriction popularized by Arnold and Fay<sup>4</sup> is obviously aimed at the loss of water. An exceedingly large intake of water, as noted above, may lead to actual diuresis above the amount ingested. Hypertonic glucose solutions given intravenously are dehydrating. Starvation results in a loss of salt and water. A high protein intake may be diuretic because of the increased urea excretion. If the high protein intake is achieved by a large ingestion of meat, there will be a relatively high potassium and low sodium intake. A milk regimen achieves similar ends.

Why, then, have these methods failed to meet with universal success in the treatment of "toxemia"? First and foremost is the fact that 85 per cent of the cases of so-called toxemia are unrelated to water retention. This fact cannot be stressed too strongly. Second, many cases of water-retention toxemia have plasma-protein levels so low that no method will achieve significant water loss. Third, cases of water-retention toxemia may be complicated by other factors as noted above. Fourth, all methods of ridding the body of excess water are not equally successful and may have harmful side effects. Last, since the aim of the obstetrician has not been clear, he has not infrequently employed measures that counteract each other. The most common of these is the employment of a salt-free diet, while saline solutions are being given

under the skin or intravenously, or bicarbonate of soda by mouth.

Although the most satisfactory clinical measure of water balance is the weight curve, it is to be remembered that all undue gains in weight are not dependent upon water. I have seen 2 patients gain 50 and 72 pounds, respectively, during pregnancy, due not to water retention but to true fat accumulation. A low sodium regimen was obviously ineffective in ridding the body of excess fat.

The doctrine that there is a critical level of the plasma proteins below which edema occurs was a necessary stage in the development of our knowledge. However, we have seen patients, with plasma proteins far below this level, who had no edema because they did not ingest the necessary salt and water to allow the formation of edema. On the contrary, other patients, because of a very large intake of salt and water, have developed generalized edema with plasma proteins well above the so-called critical level.

Why some patients may have rather marked water retention without arterial hypertension is unknown. In a number of instances marked water retention has been observed for a period of several weeks before arterial hypertension developed, and in others parturition has supervened without hypertension ever appearing. Whether these women would have eventually developed hypertension if pregnancy had continued longer cannot be said.

Although there is no evidence for such a belief, it is possible that some individual or constitutional susceptibility to hypertension is necessary in order that water retention may produce hypertension during pregnancy.

It is to be remembered that although a low sodium regimen may free the patient of retained water, result in a fall of arterial blood pressure to normal, and cause headache, drowsiness, vertigo, and visual disturbances to disappear, such a regimen does not alter the fundamental disturbance—hypoproteinemia. These patients remain in unstable equilibrium as long as the plasma colloid osmotic pressure re-

clinical and laboratory picture noted earlier under the heading, "Clinical Aspects" These women all had lower plasma proteins than normal but did not have extremely low levels The data for 1 case is given in Fig 4 and is characteristic for this group Diuresis was accompanied by the disappearance of edema and pre-eclamptic symptoms and the return of the blood pressure to the normal range All these women had normal blood pressures and negative urinalyses when re-checked several months after delivery

It thus appears that one may not only produce this type of "toxemia" by administering sodium, but one may relieve it by eliminating sodium if this results in a loss of retained water However, if the plasma protein level is extremely low, significant diuresis cannot be produced in nonpregnant subjects by such a procedure This is likewise true in pregnancy

Furthermore, one may have additional complications One patient, a primipara, seemed normal on her first three visits to the prenatal clinic Three weeks after the last visit she was admitted with edema, hypertension, and albuminuria, having gained twelve pounds in three weeks

It is of interest, that the urinary sediment showed many white blood cells and a few red blood cells The milk regimen and complete bed rest did not benefit her Induction of labor was advised but refused Following this she developed fever and later slight costovertbral angle tenderness Pyelograms were made (by Dr Benedict F Boland) that showed marked dilatation of the right ureter and renal pelvis Death occurred as a result of aspiration of stomach contents under anesthesia at parturition The necropsy revealed an extensive acute right pyelonephritis with multiple cortical abscesses and a normal left kidney Whether this case represents (1) water-retention toxemia complicated by acute pyelonephritis, (2) acute pyelonephritis complicated by water-retention toxemia, or (3) acute pyelonephritis alone cannot be stated definitely It does, however, illustrate

TABLE 2—THE EFFECT OF PROTEIN AND SODIUM CONTROL ON THE SUCCEEDING PREGNANCY IN 10 WOMEN WITH WATER RETENTION TOXEMIA

Number	Pregnancy with Toxemia			Succeeding Pregnancy* No Toxemia		
	Maximum blood pressure		Plasma protein osmotic pressure	Maximum blood pressure		Plasma protein osmotic pressure
	mm. Hg	mm. Hg	mm. H <sub>2</sub> O	mm. Hg	mm. Hg	mm. H <sub>2</sub> O
	Syst.	Diast.		Syst.	Diast.	
1	146	110	182	120	80	248
2	172	116	180	116	84	252
3	170	110	218	130	80	235
4**	190	145	175	130	90	241
5**	172	112	192	124	82	242
6	170	120		130	85	242
7	206	120		126	80	219
8**	170	100		104	60	
9**	170	115	183	130	90	215
10	162	120	120	110	70	204

\* Patients 1 to 6 were given an adequate protein intake without salt restriction patients 7 to 10 also were maintained on low salt diets.

\*\* Fetal death occurred in Cases 4 5 8 and 9 in the 'toxic' pregnancy There was no fetal mortality in the succeeding pregnancy

In the toxemic pregnancy each of the 10 women had albuminuria and pre-eclamptic symptoms In the next pregnancy the patients were asymptomatic and did not have albuminuria.

the extreme difficulty of differential diagnosis which may occur

### The Effect of Water-Retention "Toxemia" on Subsequent Pregnancy

Patients with chronic vascular or renal disease during one pregnancy will manifest these disorders not only after parturition but also in the next pregnancy Patients with water-retention "toxemia" are prone to have a recurrence unless special attention is paid to their protein and electrolyte intake in the next pregnancy Ten such women have been followed through two pregnancies They all had hypertension in the pregnancy for which they first were under observation Four fetal deaths occurred In the next pregnancy a high protein intake was commenced early In spite of this an abnormal lowering of the plasma proteins occurred in three. These women were then maintained on a salt-free regimen None of the 10 developed any manifestations of toxemia Ten healthy babies were delivered The maximum blood pressures in the two pregnancies are shown in Table 2

It thus appears that water-retention toxemia need not recur in subsequent pregnancies if adequate attention is paid to diet and electrolyte intake

3 A low sodium intake is one means of eliminating undue water retention

4. The development of water-retention toxemia may be prevented by maintaining the pregnant woman's plasma proteins at a normal level by an adequate diet and avoiding excessive sodium ingestion \*

270 Commonwealth Avenue

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## Discussion

Dr Edward C Hughes, *Syracuse, New York*—The toxemias of pregnancy, causing approximately 25 per cent of the maternal deaths of the country, have always presented a serious problem to the doctor. Many theories have been advanced to explain these conditions, but in my mind the cause still remains one of the mysteries of medicine. The fact that even classification differs with the personnel of the various clinics throughout the country substantiates the feeling that the cause is still unknown. This presentation although an excellent piece of scientific work, probably describes to us not so much the cause of toxemias as the result of some intricate mechanism yet to be discovered. Study of the toxemias at the Syracuse Memorial Hospital and in the clinics associated with the College of Medicine of Syracuse University have revealed the uncertainty of these conditions as to etiology and classification. We have found it necessary to establish a toxic, follow-up clinic, so that in time we may be able to properly pigeonhole these cases.

Our classification has apparently been about the same as that given by Doctor Strauss in his paper. Analysis of our records have shown that about 45 per cent of these cases have been classified as low reserve kidney, 35 per cent as chronic nephritis, generally of the arteriosclerotic type and 20 per cent as the true toxemias of pregnancy or pre-eclampsia and eclampsia. The

group of cases considered as low reserve kidney is an uncertain and questionable one. It has been necessary to study these individuals in our follow-up clinic, and after four years of consideration, we are not sure yet whether they are going to be of the nephritic or the true toxemia type. However, we are inclined to believe that the majority will eventually be classified as the former.

It has been definitely pointed out, particularly by Stander, that pregnancy puts an additional strain on the already damaged kidney. In our follow-up clinic, we have noted that each year some of our nephritic patients died a few years after childbirth, generally of cerebral accident, angina pectoris, or kidney disease. Although too short a time has elapsed since the beginning of this study, we feel certain that approximately 25 per cent of these unfortunate women will die within a period of ten years. This brings us to a greater realization of the seriousness of kidney disease associated with pregnancy.

There is no question that within the past ten years the incidence of pre-eclampsia and eclampsia has been remarkably reduced through the medium of good prenatal care. In order further to reduce these conditions, careful checking of the glandular function should be made throughout pregnancy. I am convinced that a study of the basal metabolism during the early part of pregnancy is essential. In 1934, a study of 1,250 basal metabolisms during pregnancy revealed a higher incidence of early as well as late toxemias in the hypothyroid group. A further study has impressed upon my mind the importance of this procedure. Recently, Colvin and Bartholomew have published their work upon hypothyroidism, correlated with cholesterol and placental infarction.

It is felt that the blood sodium is important and should be observed during the early as well as the latter part of pregnancy. This study has been made both on whole blood and blood serum. Determinations were made both spectroscopically and by a modification of the Butler and Tuttle method. Some interesting and surprising results were found. Determinations of sodium in whole blood were not as reliable as those done in a serum. Inasmuch as practically all of the sodium is carried in the serum, changes in the blood volume would necessarily distort the amount of sodium in whole blood. The level of sodium in the serum of normal individuals varied but little throughout pregnancy nor from normal in nonpregnant individuals. The level was most constant at an average of 329 mg per hundred cubic centimeters of serum during pregnancy.

\* Detailed descriptions of the observations noted in this paper and a more complete bibliography can be found in reference 7.

mains at a level at which it is constantly in danger of being overbalanced by the intracapillary hydrostatic pressure. "Cure" is not effected until the plasma proteins have returned to normal. Since "toxemia" occurs late in pregnancy, when fetal demands for protein are large, and since hypoproteinemia probably signifies not only a low plasma protein level but also a depletion of the organism's reserve stores of protein, one must not expect a rapid increase in plasma protein values during the remainder of gestation even with intensive protein feeding.

A question that inevitably must arise is whether nonpregnant individuals with similar hypoproteinemic edema show the same phenomena regarding blood pressure as do these women. It is true, of course, that the usual type of nonpregnant patient, with hypoproteinemia and seen in American hospitals, suffers from cirrhosis, nephrosis, anemia, tuberculosis, colitis, or other debilitating disease that may alter the reactivity of his vascular system.

However, it appears probable that certain peculiarities of the pregnant state itself may be responsible for this unusual behavior of the vascular system to water retention. Some of the known physiologic alterations that are present in pregnancy are a 40 per cent increase in blood volume, a 50 per cent increase in cardiac output, a moderate elevation of venous pressure, and probably moderate mechanical pressure by the enlarged uterus on the ureters and on the renal veins. Although various tests fail to reveal any consistent changes in renal function in "toxemia" of pregnancy, the fact that albuminuria is generally present in itself indicates that there is a disturbance of the kidney even though histologic examination fails to reveal anything more than cloudy swelling. The real nature of this disturbance and its possible relationship to the occurrence of hypertension as a result of water retention are unknown. The role of hormonal changes in pregnancy is so little understood that discussion is hardly warranted. It is possible that hormonal changes make the pregnant woman un-

usually susceptible to changes in water balance. However, no one has yet produced toxemic manifestations by administering hormones, and an investigation<sup>4</sup> in 1938 indicated that restoration of hormone values to normal failed to influence toxemic manifestations.

Since hypoproteinemia is one of the more important factors that permits the development of the condition of water retention, adequate prenatal care must include attention to the prevention of this condition. Although disturbances of absorption, assimilation, manufacture, and urinary loss of protein may be involved, it appears that the chief cause of hypoproteinemia in pregnancy lies in inadequate dietary intake of protein of good biologic value, especially in view of the increased demands for protein for the developing fetus and also for the maternal organism. It is, therefore, of paramount importance that the diet in pregnancy contain more, not less, protein than is in an adequate diet for nonpregnant subjects.

It is likewise important that the pregnant woman avoid an excessive intake of sodium salts under any conditions, and if she has low plasma proteins, actual sodium restriction must be employed. Anemia, which is conducive to water retention, is to be avoided by proper prophylactic measures.<sup>6</sup>

## Conclusions

1 The term "toxemia of pregnancy" is a misnomer. Approximately 85 per cent of patients so classified actually have primary vascular or renal disease. In such patients, changes in water balance do not affect signs or symptoms.

2 A large proportion of the remaining 15 per cent are suffering from water retention. This may be due primarily to low plasma proteins, to excessive sodium intake, or, in many instances, to both factors. Measures that lead to further water retention increase the severity of the "toxemic" manifestations, whereas measures that result in the loss of excessive retained water result in an amelioration of these manifestations.

3 A low sodium intake is one means of eliminating undue water retention

4 The development of water-retention toxemia may be prevented by maintaining the pregnant woman's plasma proteins at a normal level by an adequate diet and avoiding excessive sodium ingestion \*

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In nonpregnant individuals the amount was 330 mg. The levels in various months were as follows: six weeks, 327; two months, 330; three months, 329; four months, 326; five months, 327; six months, 328; seven months, 330; eight months, 331; nine months, 323.

During the early months of pregnancy, it has been felt that the sodium level of the serum changes with development of early toxemia. During this time most of the estimations were made. Definite changes were noted in toxemias in the early months of pregnancy. Cases that presented nausea alone showed an average sodium of 315.6 mg per hundred cubic centimeters of serum. Other cases presenting nausea and severe vomiting with acidosis showed an average sodium of 302.1 mg of serum. In those individuals where the level of sodium did not elevate to normal during the remaining months of pregnancy, there occurred a greater tendency to late toxemia. In the late toxemic group, cases of pre-eclampsia presented the following values: average serum sodium, 304.4 mg; average serum proteins, 5.7 mg; average serum albumin, 3.9 mg per hundred cubic centimeters of serum.

In the late toxemic group, where patients had advanced to states of convulsion, the average levels were: serum sodium, 295 mg; serum protein, 4.9 mg; serum albumin, 2.6 mg per hundred cubic centimeters.

Although the level of sodium does not coincide

with the ideas of Dr. Strauss, the protein level compares favorably with those reported by him. These low values of sodium may be based upon blood and tissue fluid dilution. In all patients of the pre-eclamptic and eclamptic group, there was the usual water intoxication, weight change, and eyeground findings.

A clinical study has been made on three groups of patients as to the incidence of late toxemias and are herewith presented. In a series of 554 private cases, basal metabolisms were not done, and consequently those presenting low rates were not treated. In this group the incidence of the late, true toxemia patients who needed hospitalization and induction of labor was 5.9 per cent. In a second series, consisting of 538 private patients, where basal metabolisms were routinely done early in pregnancy and throughout the remaining months and where all cases with low rates were treated, the incidence was 2.5 per cent. In a third series of 621 private patients, basal metabolisms and blood sodium studies were done throughout pregnancy. All patients with low metabolic rates and low sodium levels were treated, and in this group, the incidence of toxemia was 1.6 per cent. No explanation is attempted at this time as to the relationship of these conditions. However, it is felt that the pituitary, thyroid, and perhaps the adrenal disturbances and relationship may someday divulge the secret of the etiology of pregnancy.

## WHAT BECOMES OF LEFT-OVER MEDICINES?

The doctor prescribes a simple medicine for Mrs. Smith's child. Mrs. Smith thinks, "Why spend money on that medicine? I still have some of it left in my family medicine chest." She opens a small bathroom cabinet. There are bottles of all sizes, half filled, some without label, partly used bandages, a fever thermometer, five bottles of mouthwash, two bottles containing eyedrops, a few solitary pills, stale salves and ointments, and adhesive tapes of various sizes.

Among this mess Mrs. Smith looks for the prescribed medicine. At last she finds the bottle she has been looking for (brown—wasn't it?) and asks herself, "I wonder whether it is still good?" At last caution wins over economy. She pours the medicine away, takes her prescription to the drug store and has the medicine made up again.

Fortunately, observes the *Medical Record*, this procedure is more frequent than the opposite; that, to save some money, some old, spoiled, or unsuited medicine is taken. This rule cannot be repeated too often to mothers and housewives. Clean out your family medicine chests, throw away dirty bandages, empty your old bottles, remove what you can no longer use. True, a

well-closed alcoholic liquid may be preserved for years, but many medicines spoil within a short time.

What happens generally to left-over medicines? Only a small part is used, and people cannot make up their mind to throw away the rest. Some people insist on giving what is left of their medicine to somebody else as soon as he gets sick. What is medicine to one person, may be poison to another.

Another danger in saving medicines is that labels fall off. The owners of medicines know how to distinguish them by the shape of the bottle, and while they are using it, they do not have to look on the label to find the right medicine. But after a long period, it is not so easy, and serious errors may be the result.

In many cases it is a waste of space and effort to save old medicines. This economy is advisable, of course, for chronic diseases where the same medicine or tablets have to be used occasionally, but not for medicines that had been prescribed for a special acute illness. They should be thrown away as soon as the illness has been cured and not remain a source of constant danger from a wrong kind of economy.

# Case Report

## MIGRATION OF A FOREIGN BODY

### Report of One Case

ELIOT DUHAN, M D , Richmond Hill, New York

THE medical literature has some cases of unusual interest describing the migration of foreign bodies to distant points of the anatomy presumably along fascial planes. Needles have worked their way to the heart and other sites remote from their point of entry. The case that is described below is rare, since swallowed objects usually pass along the intestinal tract.

#### Case Report

The patient is an intelligent active woman of seventy years. While eating rice pudding on the evening of May 8 1938, she suddenly felt a sharp stick in the right side of her throat. She thought that she had swallowed a needle. So much confusion resulted that she was rushed to a local hospital.

Here a laryngoscopy and x-ray revealed nothing. (Re examination of this x-ray shows that it was taken below the offending object and hence failed to show it.) The pain however continued on the right side and after three days shifted to the left side. Sixteen days after the accident a foreign body was palpated beneath the skin.

A later x-ray (Fig 1) of the neck "reveals a slightly bent metallic substance about 13 cm in length lying with its upper end at the upper level of the anterior portion of the hyoid bone and pointing obliquely downward and posteriorly with one end just under the skin." The photograph (Fig 2) reveals the elevated skin in the region of the middle third of the sternocleidomastoid muscle at its anterior border.

This object was recovered under local anesthesia. It was a wire 29 cm in length, moderately stiff and slightly bent in its center. There was no associated cellulitis or infection. Recovery was complete.

120-11 103rd Avenue



FIG 1 X-ray showing metallic substance at the upper level of the hyoid bone.



FIG 2 Photograph showing the elevated skin at the border of the sternocleidomastoid muscle

Deaths from tuberculosis can be reduced 50 per cent by health supervision of industrial workers in occupations predisposed to the disease, by detection of incipient cases, and by

provision of adequate medical and institutional care in the early stages of the disease.—*Handbook Coop Health Association, Utah W.P.A., 1939*



# Maternal Welfare

*This is the first of a series of articles to be published under the section, Maternal Welfare, which was inaugurated in the April 15 issue. The Maternal Welfare Committee welcomes suggestions for this department from the individual members of the State Society. The members of this committee are Charles A. Gordon, M.D., chairman, James A. Quigley, M.D., and Ferdinand J. Schoeneck, M.D.*

## Early Recognition of the Toxemias of Pregnancy

**T**HE classical signs of toxemia of pregnancy may be listed as follows: hypertension, albuminuria, and edema often associated with the subjective symptoms of headache, dizziness, spots before the eyes, and epigastric pain. This syndrome is easily recognized by any senior medical student, but the practitioner must diagnose toxemia before it has developed if he hopes to get satisfactory results in his treatment. Certain early signs are significant.

### Case Report

Mrs. H. J., aged 26, gravida 1. Last menstrual period was March 21, 1939, due on December 28, 1939. She was seen first during the third month of pregnancy. Family and personal history was not significant, except for scarlet fever and jaundice during childhood. Physical examination was negative. Normal weight 135 pounds.

This patient had routine prenatal examinations every two weeks. Pregnancy was uneventful until four and one-half months. On July 20 her weight was 138½ pounds, blood pressure was 106/80, pulse 80, urine negative. On August 2, she weighed 143½ pounds. Other findings were normal. This 5-pound gain in two weeks was considered abnormal. Patient was advised to restrict diet and activity. Weekly prenatal visits were now advised. From August 2 to October 4, the patient gained 9 pounds.

During the ensuing week the patient gained 6¾ pounds and when seen on October 10 she presented a picture of generalized edema. Although the blood pressure and urine were normal, a diagnosis of impending toxemia was made. She was placed in bed, the diet restricted to 1,500 cc of fluids (milk, water, fruit and vegetable juices), one helping of cooked vegetable, one helping of cereal, and three crackers in twenty-four hours. Six drachms (24 Gm.) of magnesium sulfate was given by mouth. The patient was also given desiccated thyroid, gr 1½ (Gm 0.032) three times a day, because of dry skin and slow pulse rate (B.M.R. at beginning of pregnancy was -4).

Three days later, October 13, her weight was 147½ pounds (a loss of 10¼ pounds). Blood pressure was 104/80.

This patient was seen every three days during the remainder of pregnancy. Activity was markedly restricted and diet minutely regulated. On October 23, her weight was 145½ pounds and blood pressure was 116/80, faint trace of albumin. On December 26, weight was 156 pounds and blood pressure was 110/80, pulse 80, urine negative. On December 31, she was de-

livered of a normal male child weighing 8 pounds, 4 ounces. Convalescence was uneventful.

While the authenticity of a diagnosis of toxemia in this case may be open to dispute, it is a recognized fact that an abnormal increase in weight, over a short period of time, may be the first sign of an impending toxemia. If the condition is recognized as such and proper treatment instituted, a severe toxemia may be avoided. Such early signs can be recognized only if the patient is seen at frequent and regular intervals throughout her pregnancy.

Mild degrees of hypertension may likewise be the prodromal signs of toxemia. If the patient is seen often, the physician can obtain a true idea of her normal blood pressure. Thus, when an individual who on several visits has an average blood pressure of 110/70, presents herself with a pressure of 130/80, the twenty-point rise must be taken as significant and the patient recognized as being in danger of developing a true toxemia. Attention should also be given to the significance of a rise in diastolic pressure, even though there may be no particular change in the systolic reading. It can be said, arbitrarily, that in the absence of other signs or symptoms, systolic readings of 140 (or over) or diastolic pressures of 100 or more, must be considered as danger signs and recognized as possible indices of impending toxemias.

Albuminuria may be significant, especially if associated with casts. It must be remembered that the leukorrheal discharge so often associated with pregnancy may give typical albumin reactions. When albuminuria is the only sign, the patient is entitled to catheterization under the strictest aseptic conditions. If the catheterized specimen shows albumin and/or casts, red blood cells and white cells, toxemia must be considered. If cystitis and pyelitis can be ruled out, the patient should be treated for toxemia.

The physician on recognition of any of these early signs of toxemia must consider the potentialities. In general, three courses are open: (a) the patient should be put at bed rest, a carefully considered diet ordered, and indicated medi-

caution prescribed. The physician must then assume the responsibility of daily checks on the patient until such time as the toxemia is under control. The patient must be considered as a potential candidate for a toxemia during the remainder of her pregnancy. (b) The patient may be hospitalized and the case worked up sufficiently to establish a diagnosis which will indicate the treatment to be carried out. (c) In

event the physician does not care to assume the entire responsibility of the situation, competent obstetrical consultation should be obtained.

The proper attention to these early signs of impending toxemia will often prevent serious consequences. It is only by such early recognition that we will cut down to an irreducible minimum the incidence of maternal mortalities due to toxemias.

### THE HAND OF THE SURGEON

The hand that guides the instrument that may mean life or death to the patient has naturally been a subject of interest to those engaged in the practice of surgery from ancient times, says C J S Thompson, honorable curator of the Historical Collection at the Museum of the Royal College of Surgeons of England (*Lancet*, Feb 10, 1940, quoted in the *Medical Record*). In the Hippocratic writings, Mr Thompson continues we have the first allusion to the hand of the surgeon, and we are told of the importance the ancient Greeks attached to the instrument being adapted to the hand of the operator and also the means he should use to acquire dexterity and elegant manipulation. Mr Thompson says

It seems a natural conclusion that a hand that is to carry out delicate operations should be finely formed, with long, sensitive and flexible fingers, but this conception is not invariably correct. Close observation of the hands of many surgeons famous in their own countries as operators, while attending various international gatherings, brought disillusionment. The majority did not coincide with the preconceived idea of what a surgeon's hand should be.

"Instead of sensitive and tapering fingers with a finely formed palm, many of the hands were large and clumsy, with thick, short fingers and spatulate tips, apparently more suitable for stopping the strings of a violin than handling a delicate instrument. The late Dr Harvey Cushing some years ago told me that he also had been struck with the idea of making a collection of casts of surgeons' hands when he was at the Peter Bent Brigham Hospital in Boston. His collection, which included casts of the hands of W W Keen, William Mayo, Putti, Bastianelli G W Crile, and W P Graves, were later deposited in the Warren Museum at the Harvard medical school.

"I was led to the idea of forming such a col-

lection for the museum of the Royal College of Surgeons after visiting the anatomical section of Edinburgh University many years ago, when I was attracted by a hand, carved in marble, holding a scalpel. It proved to be the hand of James Syme, professor of surgery at Edinburgh between 1799 and 1876, and regarded as one of the boldest and most successful operators of his time. One of Syme's most ardent disciples was Joseph Lister. A study of Syme's hand in marble was made by Brodie, the famous Scottish sculptor. A cast was made for Dr John Brown and it has now been added to the collection.

Another important addition to the collection was a radiogram of the hand of Lord Lister made at King's College Hospital, which is believed to be unique, and was presented by Mr Cecil P G Wakeley, F.R.C.S. From the bony structure a good idea of the size and shape of his hand may be formed. Where casts were unobtainable, photographs have been substituted when possible, and among these, excellent prints have been added of the hands of Lord Moynihan and Sir Mayo Robson.

In fulfilment of a promise made to me by Harvey Cushing shortly before his death, a cast of his hand has now been received for the collection. It is a replica in bronze of the one he had made in Boston and is characteristic of the man. The fingers are small and short with broad tips but are well spaced, and it is interesting to compare it with the hand of James Syme. Syme's hand, with its slender tapering fingers and small nails, measures nine inches in length. The index finger is four inches long and the palm is three and one-quarter inches wide. In contrast with this, the length of Harvey Cushing's hand is seven and one-half inches only and the index finger three and three-quarter inches long while the palm measures three and one-half inches across."

### THE DOCTOR'S 'OFFICE GIRL'

I'm just the doctor's "office girl"—  
I dust the desk and such,  
Straighten the mail and tidy the room  
And add the feminine touch

I'm just the doctor's "office girl"—  
Each morn I sort the mail,  
Unlock the door and wind the clock  
Like our maid Abigail

I'm just the doctor's "office girl"—  
I answer every call  
In tones all sweet and sugary  
Yet bacteriological

I'm just the doctor's 'office girl'—  
I smile and nod all day  
And try to let each patient take  
A cheery thought away

I'm just the doctor's 'office girl'—  
With his patients all around—  
Dear Lord help me to daily keep  
MY patience safe and sound!!

—(To be chanted—Andante con espressione)  
Published in the J.A.M.A., from the girl (M L  
J. Missouri), who married the doctor

# Medical News

## Things That Are Changeless in a World of Change

**I** AM HERE to throw down the gauntlet and to issue the challenge that those things which have remained unchanged in man and his world are of greater importance than those which have been violently altered," declared Dr. Terry M. Townsend, president of the State Medical Society, at the dinner given in Canandaigua on April 9 to celebrate the fifty years of membership of Dr. John H. Pratt, of Manchester, in the Ontario County Medical Society. Dr. Townsend said, in part:

"One of your members has been a physician for fifty years—that alone is worthy of remark. He has served with success that arouses our respect. He has taken a leading part not only in medical affairs of his community but has extended his leadership into the business of living and welfare of his neighbors and they like him. These things add grace to a life, they give quality to a community. It is fitting that the county society should recognize these excellent things in one of its own members, and it reflexively honors the community that has the intelligence and wisdom and the desire to do so.

"Those organizations of men that honor the achievements of the past also grace and exalt present excellence and lay strong foundations for a more secure and glorious future. Aware of the strength and soundness of its foundations, society can build with confidence a structure of greater worth. Future generations will observe, wonder, and exclaim 'behold, the building. For it was good and what manner of men were these that did great works'.

"What manner of men, indeed. At the top of this list, completing his fiftieth year in medical practice in 1904, is J. Richmond Pratt, graduate of Jefferson College in 1851, who in that very same year became a member of the Ontario Medical Society. He served as president of the society in 1882 and died at the cabalistic age of ninety-nine years and nine months. And, it is his son, a lifelong resident of Manchester, of Ontario County, president of the county society six years after his graduation from Bellevue Medical College in 1890, whom we honor today for the passage of his first fifty years of medical practice. There is a man worth looking at, worth knowing, and worth studying."

### Different 50 Years Ago

"Fifty years ago when this man burst out of medical school and set an example by at once joining his county medical society, the practice of medicine was, in some of its aspects, an entirely different thing than it is today—some think so. Others think that the world of fifty years ago was entirely different in important respects. There are those who consider the change quite revolutionary, especially the younger among us who never knew what it was like, and who rely upon the tales of their seniors.

"Persons who write the best selling books about country doctors and country lawyers seem to agree, but my opinion differs from these deeply. I believe that neither men, nor the practice of medicine, nor yet civilization has changed much in an abiding fundamental way. I am here to throw down the gauntlet and to issue the challenge that those things which have remained unchanged in man and his world are of greater importance than those which have been violently altered.

"We can look back fifty years or one hundred years to the time when Dr. Pratt's grandfather, Franklin B. Hahn, was about to become secretary of this county society, and find certain things that are unchanged today. These things which alter most rapidly are prized on this account by those to whom the strange, novel, new are especially attractive."

### Saw Fads Come and Go

"But these are composed largely of error. Dr. Pratt with his fifty years of experience has seen fifty different fads come and go. They were based upon the eager guess of the young physician. These brilliant theories rode high wide, and handsome, but fell ignominiously and now lie in forgotten neglect.

"Such a man may be forgiven if he views each new thing in medicine with a certain academic reticence, if he has become a trifle slow in responding to the latest panacea, if he regards the ways of practice which have given comfort and saved lives over a half century with high regard, if, in other words, he is conservative. Honor him for it. Emulate him. We are reminded of the immortal Hippocrates, 'Above all things, do no harm'."

## County News

### Albany County

Dr. Charles F. Branch, professor of pathology at Boston University's School of Medicine, addressed the Albany County Medical Society on "Clinical and Pathological Aspects of Cholelithiasis" at a scientific session in Albany College of Pharmacy auditorium, on April 24.

### Bronx County

The Bronx County Medical Society met on April 17 at Burnside Manor and listened to papers on "Voluntary Health Insurance" by

Dr. Harry Projector, and "Report of the Temporary Commission to Formulate a Long Range Health Program" by Dr. George Baehr.

The North Bronx Medical Society met on May 2 at Elsmere Hall and heard an address on "Missing Persons" by Capt. John G. Stein.

The Bronx Gynecological and Obstetrical Society met at The Concourse Plaza Hotel on April 29. The program was as follows: Case Reports (1) Postoperative Vesicovaginal Fistula, by Dr. Joseph O. Smigel, (2) Pyosalpinx

Following Radiotherapy for Fibroid Uterus, by Dr William Godsick, (3) Early Epidermoid Carcinoma in a Cervical Polyp by Dr Meyer J Loscow Paper The Bleeding Factor in Menstruation Report of Two Cases, by Dr Leo Wilson

#### Broome County

The Broome County Medical Society met at the Monday Afternoon Club House, in Binghamton, on April 9 and heard a talk on "The Twilight of the Family Physician," by William Alan Richardson, managing editor of *Medical Economics*

#### Cattaraugus County

The lowest death rate ever recorded for the county, a further drop in the tuberculosis death rate to 17.8, less than one-fourth of the average before the county inaugurated an intensive health program, only two cases of diphtheria during the year and no deaths, as compared with 311 cases and 15 deaths in 1919, are shown in the annual report of the Cattaraugus County Board of Health, for 1939

In transmitting the report to the board of supervisors, John Walrath of Salamanca president of the county board of health, summarized the year's record as follows

"The year 1939 shows the lowest death rate ever reported for this county. Decreases occurred in deaths from diseases of the heart and diabetes. New low records were achieved in pneumonia and tuberculosis

"The program for maternal, infant and child health developed still further. Fewer county babies died than in any year before, the drop was ten per cent below the previous low figure. Maternal deaths were fewer. Efforts to save premature babies were more and more successful. Obstetrical consultants were furnished for expectant mothers when complications appeared. The correction of defects among preschool and younger school children was more widespread. Support for this program came from federal, state, and county budgets and from the Milbank Memorial Fund. A special study on care of mothers in pregnancy was completed and is now being tabulated

"The position of the county in its work for health was shown when we received first prize in the northeastern states in the Rural Health Conservation Contest, conducted under the auspices of the United States Chamber of Commerce and the American Public Health Association "

#### Cayuga County

More than 150 physicians from Auburn, Syracuse, Seneca Falls, Geneva, and other places in central New York attended the Cayuga County Medical Society meeting at Auburn on April 18. Dr W. A. Tucker, president of the society, presided. The guest speaker was Professor Ruben of Columbia University. A buffet luncheon was enjoyed

The auxiliary of the Medical Society also met, at the City Hospital, for a business session. Mrs. George C. Sincerbeaux, president, was in charge.

#### Chemung County

Child health clinics that have been held monthly in various communities throughout the county are being curtailed because of a reduction

in the federal-state funds that formerly financed the program

For about two years monthly clinics have been held in Big Flats, Pine City, Wellsburg, Chemung, Horseheads, Millport, Elmira Heights, Van Etten, and Erin

Physicians named by the Chemung County Medical Society conducted the clinics, aided by county health nurses. The expense was met with funds appropriated by the Social Security Administration and distributed by the Division of Maternity, Infancy, and Child Hygiene of the State Department of Health

Under a new plan the federal-state appropriation will cover only a third of the cost and the remaining two-thirds must be borne by the respective towns

#### Dutchess County

Dr A. Benson Cannon, chief dermatologist of Vanderbilt clinic, New York City, spoke on "The Present Day Viewpoint of Skin Diseases" at a meeting of the Dutchess County Medical Society at the Amrita Club on April 10. He illustrated his lecture with colored slides, demonstrating various phases and types of skin irritations

Dr Paul Harrison, of Arabia, also talked to the group of seventy doctors outlining his duties and medical problems as the head of a missionary hospital in the Near East, where he has practiced for twenty-five years

#### Erie County

Greater dissemination of information on cancer, with emphasis on its curability in the early stage, and the need of regular "thoroughly complete" physical examinations to spot any possible symptom was urged by speakers at the annual cancer-control meeting of the Medical Society of the County of Erie in Hotel Statler, on April 15, as reported in the *Buffalo Evening News*

Dr John M. Swan, of Rochester, executive secretary of the New York State Committee of the American Society for the Control of Cancer, reported that 30 per cent of the deaths in the state in 1938 were caused by heart disease and only 13 per cent by cancer

Listing cancer deaths in the state during the last five years, Dr A. H. Aaron declared that many of them were entirely preventable and urged doctors to make complete examinations despite the reluctance of some physicians to examine thoroughly an apparently healthy person

In a plea for greater public education on cancer, Dr Aaron cited the results of a recent poll that showed that an insufficient number realize that cancer is curable in its early stages, and not contagious, or understand what its symptoms are

Dr Leon H. Smith, chairman of the society's cancer committee, presided

The Section of Surgery of the Buffalo Academy of Medicine listened to a paper on "Infections of the Hand," by Dr S. L. Koch, of Chicago, at its meeting on April 3. On April 10, Dr F. A. Evans of Pittsburgh addressed the Section of Medicine on "Obesity." On April 17, Dr C. T. Beecham, of Philadelphia, spoke on "Maternal Welfare" to the Section of Obstetrics and Gynecology and on April 24 the Academy held

an Orthopedic Forum, with an interesting program of topics and speakers. No more meetings of the Academy will be held until fall.

### Fulton County

A meeting of the Fulton County Medical Society was held on April 11 at the Hotel Johnstown, featuring a talk by Dr. John M. Swan, of Rochester, cancer specialist, on "Cancer Control Problems in New York State."

### Jefferson County

The Medical Society of Jefferson County, at its meeting on April 11, heard an address by Dr. John C. M. Brust, assistant professor of proctology, Syracuse University, on "Infections in and About the Rectum, Their Etiology, Significance, Sequelae and Treatment." The meeting was preceded by a tumor conference at Mercy Hospital.

Four lectures on physical therapy were arranged for the society on April 18 and 25, May 2 and 16.

### Kings County

The Medical Society of the County of Kings, at its meeting on April 16, listened to papers on "Clinical Studies in Primary Malignancy of the Lung," by Dr. Richard H. Overholt, and on "Reconstruction of the Arm and Hand," by Dr. S. Potter Bartley.

The Friday Afternoon Lectures on May 3 and 10 were on "Differential Diagnosis of Neoplasm and Primary Vascular Disease of the Intracranial Cavity," by Dr. E. Jefferson Browder, and on "A Full Consideration of the Method of Examination for Diagnosis of Urological Conditions (to Include Points on Therapy)," by Dr. Augustus Harris.

The first annual spring festival of the Medical Society of the County of Kings and the Academy of Medicine of Brooklyn occurs on May 13-18, with tennis, bowling, hobby show, trapshooting, and a concert.

A course of lectures on gonorrhea was given in the section room of the Medical Society of the County of Kings on four Saturday mornings, April 20 to May 11.

The program of the Ridge Boro Medical Society on April 11 included "Work and Functions of the Federal Bureau of Investigation, with Special Regard to the Medical Aspect," Mr. G. A. Paulson, Federal Bureau Investigation, moving picture "You Can't Get Away with It."

The Ocean Medical Society, on April 15, heard a paper on "Sepsis—The Consideration of the Etiology, Pathology and Treatment," by Dr. Meyer A. Rabinowitz.

The Academy of Pediatrics listened to these addresses at its meeting on April 24: "Encephalomyelitis," Dr. W. D. Ludlum, "Two Cases of Hemorrhagic Encephalitis Due to Arsphe-namine," Dr. C. Friedman and Dr. M. Shunefeld, "Osteochondroses Ischiopubica," Dr. D. M. Goldstein, "Phenyl Pyruvic Oligophrenia," Dr. J. Mehring, "Aleukemic Myelosis, with the Widespread Decalcifications, Particularly of the Vertebral Column," Dr. Eisenberg, "Effect of Testosterone Propionate on Epiphyseal Closure," Dr. M. B. Gordon, "Two Cases of Staphylococ-

cus Empyema in Infants, with Recovery," Dr. L. Sternfeld.

The L. I. Radiological Society heard an address on April 25 on "The Differentiation of Specific Diagnostic Roentgen Shadows in the Bones," by Dr. Albert B. Ferguson.

The East New York Medical Society met on May 6. Its program was a Symposium on Cryomotherapy (So-called Artificial Hibernation) by Dr. John C. A. Gerster and his associates of Lenox Hill Hospital.

Although the curative value of the "frozen sleep" method of treating cancer is not yet established, the treatment has proved its worth in reducing pain, Dr. John C. A. Gerster, chief of cryomotherapy at the Lenox Hill Hospital, Manhattan, told the Williamsburg Medical Society at a symposium in the Jewish Hospital, St. Marks' and Classon avenues, on April 8.

"Although the so-called frozen sleep cannot be regarded at present as a cure," Dr. Gerster said, "it gives such marked relief from pain that if it did nothing else it would still be valuable."

Others who spoke on "frozen sleep" were Dr. W. Laurence Whittemore, Dr. Carl A. Reich, Dr. Thomas K. Davis, Dr. Madge C. L. McGuinness, Dr. H. R. Kenyon, Dr. John F. Dixon, and Dr. Paul Kurt Sauer. Dr. Charles Gold-man, president of the society, presided.

Prominent physicians and jurists of Brooklyn, Queens, and Manhattan attended a dinner in Essex House, Manhattan, on April 18, in honor of the completion by Dr. George Forbes, formerly of Astoria, of a half century in medical practice. Dr. Forbes, a pioneer in x-ray work in the United States, was presented with a sterling silver tray and cocktail glasses by Dr. Rudolph Harriman, chairman of the testimonial.

A surprise was the appearance at the dinner of Ethel Merman, stage and screen star, who sang several songs. Miss Merman was one of the hundreds of babies brought into the world by Dr. Forbes.

### Livingston County

The Livingston County Medical Society met April 24, at Dansville General Hospital. The guest speaker was Dr. Walter Callahan, of Rochester. His topic was "Advances in Surgery."

### Monroe County

Striking a "profit" balance on their ledger sheets, Rochester State Health District officials estimate that contagious disease control measures saved 3,673 lives in Monroe County last year.

Using the 1900 state health rate of 18.1 per 1,000 as a yardstick, Dr. Paul A. Lembcke, district state health officer, and his assistant, Dr. Ralph M. Vincent, figure that 8,350 deaths would have occurred had that rate prevailed. But there were only 4,677 deaths here.

Other comparisons released by the state health officers graphically illustrate the progress of life-saving activities during the past four decades.

Had the 1900 typhoid fever rate of 26.7 per 100,000 prevailed in Monroe County, 123 deaths could have been expected during 1939 because of that disease. But there actually were only

two deaths for a rate of 0.4, compared with a slightly lower state rate of 0.3

If the 1900 diphtheria rates had held true last year, 209 deaths could have been expected, for a rate of 45.4. There were no deaths at all from diphtheria in 1939.

Tuberculosis, Dr. Vincent estimated, would have claimed 858 lives in Monroe County last year, had the rate been 186.5, the same as in 1900. As it was, only 121 died, for a rate of 26.1, far below the 1939 state rate of 43.7, which would have meant 200 deaths in Monroe County.

In striking their "profit" balance, Doctors Lembecke and Vincent point out that the saving in the numbers of serious illnesses and deaths chiefly affected those under 45 years of age. Gains were due largely to the decrease in the diseases of infancy and early childhood, as well as to the decline of tuberculosis, diphtheria, and typhoid fever.

Economically, as well as in human terms of lessened grief, worry, and suffering, the savings resulting from better control measures, better sanitation and purer foods, are beyond calculation, the officials said.

### Montgomery County

The Medical Society of the County of Montgomery adopted the following memorial:

Dr. Charles Stover, who died at his home, 31 Division Street, Amsterdam, New York, on April 9, 1940, was in his ninetyeth year of age. With his death again passes another ex-president of the Medical Society of the State of New York.

Dr. Stover was born in Dansville, New York, February 28, 1851. His premedical education was acquired at Seneca Falls Academy and Cornell University.

He was graduated from the Medical College of the University of Pennsylvania in 1880 and began practicing the year of his graduation with the late Dr. Wm. H. Robb, in Amsterdam.

This alliance continued for three years when he continued practice by himself.

He early gained an excellent and enviable reputation for his vigilant, intelligent, and devoted care of his patients.

Dr. Stover was a bachelor who seemed always to have had a well-appointed home with excellent caretakers, during the last few years his home life was gladdened and animated by the presence of his niece, Mrs. Walter Donnan.

This monastic form of life suited his temperament and habits very well, perhaps his most distinguishing characteristics were deliberation, order, system, method, and a regimen which included the most scrupulous personal appearance.

Dr. Stover's mind was elastic and readily responsive and adjustable to meet the requirements of changing conditions of practice, but, with great moderation for we are all aware of the not infrequent announcement of the discovery of ways and means, unknown before, to remedy or remove this or that morbidity or pathology, that time and experience prove of little or no value. In such cases the one who subordinates moderation to enthusiastic approval has much to disavow and repudiate.

When we consider the great amount of work Dr. Stover was able to accomplish, we should also keep in mind the condition of ill health under which he almost continually worked. During

his entire life he struggled against the weariness and strain of abbreviated health. He explained to this writer that as early as his eighth year he was unable to run with other children, if he did he invariably expectorated blood.

The late Dr. Edward G. Janeway diagnosed his left lung as an arrested case of tuberculosis, fibrous in type. It remained, however, for the x-ray of recent years to strengthen and sustain this remarkable diagnosis of the eighties.

Injurious and debilitating as this lung condition certainly was, it was complicated with other disabling factors, twice he suffered from typhoid fever which left him with an infected gallbladder. The x-ray, when it could do so, revealed a collection of more than seven concretions in that viscus. Food so necessary in lung infection became his "bête noir" in gallbladder infection.

When we think of the extreme attention paid to athletics in American educational institutions, it seems a deviation from truth, facts and practical experience to represent muscular strength as an indispensable or necessary requisite to health and success in life as compared with that indefinite something which for the want of a name is called constitutional strength and resistance.

Dr. Stover was an excellent citizen, friend of the low in station, highly respected by all, a tireless worker in every good cause. He worked earnestly in developing our first hospital in 1888 and remained a trustee and member of the staff to his death. He was also a member of the staff of St. Mary's Hospital from its beginning.

He helped organize the Amsterdam Medical Society and was one of its early presidents. He also was ex-president of the Medical Society of the County of Montgomery at one time secretary of the Board of Trustees of the New York State Hospital for the treatment of incipient pulmonary tuberculosis at Ray Brook, New York, and an examiner for same. He was health officer of the City of Amsterdam from 1882 to 1889 and was an organizer and official of the Montgomery Sanatorium for tuberculosis in Montgomery and Fulton counties.

He was past-president of the Amsterdam Chamber of Commerce, and during the World War he was a member of the Montgomery County Draft Board and also one of the organizers of the Tuberculosis and Public Health Association of Montgomery County of which he was secretary for thirty-two years. It is not possible to more than mention his numerous interests in civic and professional lines, such as the Historical Society of Montgomery County, the park development, and many others.

Men who write biographic sketches of departed friends are ill-fitted for the task, they do not measure up to the requirements, their feelings are apt to override sound judgment, and they omit that which is important and necessary.

He had few if any illusions—work gave to him life's greatest satisfaction and his work was to try and diminish human suffering. There was nothing peevish, bitter, or depressing, nothing assumed or studied in his social or professional relationship. His presence in any circle obtained the most respectful hearing and consideration.

### Niagara County

More than one hundred physicians and lawyers attended a joint dinner meeting at the Hotel

Niagara on April 16 under the auspices of the Niagara Falls Academy of Medicine and the Niagara Falls Bar Association. Alger A Williams, Buffalo attorney, who has a large practice involving medical testimony, discussed "Expert Medical Testimony." Joint presiding officers were William L Hunt, president of the bar association, and Dr Frederick A Lowe, president of the medical academy.

Dr Donald K Miller, clinical director at the Edward J Meyer Memorial Hospital, Buffalo, and the University of Buffalo faculty, spoke at the meeting of the Niagara County Medical Society on April 9 on "Recent Advances in Physiological Chemistry as Related to Clinical Medicine."

#### Onondaga County

Dr Thomas P Farmer, distinguished leader in medicine and civic service in Syracuse, died on April 12 at the age of 57. Dr Farmer in 1919 was secretary of the State Society's section of obstetrics and gynecology, and he long served as chairman of the Syracuse district of the American Society for the Control of Cancer. The district included six counties.

For years Dr Farmer was chairman of the committee on public health and medical education of the Medical Society of the State of New York.

He had won wide recognition in this work for the State Society when, in 1935, he was selected by the society as a member of a commission of four to go to Europe to study methods of control of venereal diseases.

On his return to Syracuse, Dr Farmer immediately became an outstanding figure in a state-wide campaign for public education for the eradication of syphilis.

In his work for cancer control, Dr Farmer was a martyr. The research to which he gave himself courageously and wholeheartedly required the constant working with and handling of radium.

That mysterious and powerful element gave Dr Farmer numerous severe and painful burns. He suffered in silent patience, and no one but himself ever really knew the agony he went through in his sacrifice of self for science and to save his fellowman from pain.

At the time of his death he was chairman of the Syracuse Housing Authority, having served as a member of that commission from its inception.

#### Ontario County

Dr Harry M Smith read a paper on "Terminal Ileitis" at the meeting of Canandaigua Medical Society on April 11 in The Canandaigua. Dr E C Merrill was host at dinner.

There was a general discussion of the paper, with Dr C Harvey Jewett and Dr Carr conducting a discussion from an x-ray and pathologic standpoint. The guest of Dr Smith, Mr Shaw, a magician, entertained the group. Dr Frederick C McClellan was host May 9, when Dr Robert M Ross was speaker.

#### Oswego County

There was a meeting of the Oswego County Medical Society held at the Hotel Pontiac, March 28. Preceding the meeting dinner was served at 6:30 for members and guests. Guests

included the Woman's Auxiliary and members of the dental and nursing profession.

Dr Louis C Kress, director of cancer control New York State Department of Health, was the speaker. Dr Grover C Elder is chairman of the newly organized Cancer Committee of Oswego County. Others on the committee are Dr Carl Worboys, Mexico, Dr W S Merrill, Parish, Dr F E MacCallum, Pulaski, A S Cincotta, Fulton, Dr G J Fatta, Minetta, E J Dillen, Phoenix, and Dr A J Hiltbrand, representing the dental fraternity.—*Reported by Francis L Carroll, M D, Secretary*

#### Queens County

Dr Robert L Levy, consulting cardiologist at the French Hospital and the New York Infirmary for Women and Children and an associate physician at Presbyterian Hospital, addressed the Queens County Medical Society in Forest Hills on April 19 on "Diagnostic Therapeutic Aspects of Cardiac Pain."

The Child Welfare Committee of the Queens County Medical Society and the Public Health Committee of the Woman's Auxiliary recognized National Health Day on May 1, in the form of a child health program.

The program included "Prenatal Care," "Immunization in Childhood," "The Common Cold," "Essentials of an Adequate Diet," "Rheumatic Fever," and "Dental Caries."

Dr Cary Eggleston spoke at the Queens County Society Building on April 5 on "Etiological Types of Heart Disease," and Dr Robert L Levy on April 19 on "Cardiac Pain."

#### Rensselaer County

Surgical treatment of coronary artery disease was discussed by two prominent New York specialists at a meeting of the Rensselaer County Medical Society in Troy on April 9.

The speakers were Dr Samuel A Thompson, attending thoracic surgeon at the Fifth Avenue Hospital, New York, and Dr Milton J Raisbeck, attending cardiologist at the same hospital.

The discussion of surgical treatment for coronary cases included special reference to cardiopericardiopexy, with illustrated lantern slides and colored motion pictures. A discussion was also conducted on "The Selection of Cases of Coronary Artery Disease for Surgical Treatment."

#### St. Lawrence County

Recent developments in treatment of arthritis by physical therapy were discussed by Dr Richard Kovacs, New York City, at a meeting of the St. Lawrence County Medical Society at St. John's Hospital on April 18. Dr Kovacs is a member of the staff of Polyclinic Hospital.

Members of the society decided to postpone action on a proposition to adopt medical indemnity insurance pending further study of the plan.

#### Saratoga County

An exceptionally fine series of x-ray plates showing follow-up work made the topic, "Early Diagnosis of Tuberculosis," given by Dr William H Ordway on April 10 to the Saratoga County Medical Society one of the most interesting and informing in a series of meetings at the

Metropolitan Life Insurance Sanatorium, McGregor Dr Ordway was assisted by his staff at the Sanatorium

"Tuberculosis in Saratoga County" was the topic of Dr G Scott Towne, surveying the present status of the disease. This was followed by general discussion opened by Dr Leon Chadwick, of the Homestead Sanatorium

#### Suffolk County

The second quarterly meeting of the Suffolk County Medical Society was held at Friede's Riverside Inn on Wednesday evening, April 24, at seven o'clock. Meeting of the society heretofore had been scheduled for 11 o'clock in the morning, but members agreed that the evening meeting and dinner would be better attended

#### Sullivan County

A course of lectures on hemorrhage was arranged for the Sullivan County Medical Society in March and April by Dr A F R Andresen from the Department of Medicine, Long Island College of Medicine, under the sponsorship of the Council Committee on Public Health and Education of the Medical Society of the State of New York. All the lecturers were from the Long Island College of Medicine.

#### Warren County

The Warren County Medical Society conducted its monthly dinner and meeting on April

4 at The Queensbury Dr Frank R Ober, professor of orthopedic surgery at Harvard Medical School and the University of Vermont Medical School, spoke on "Lame Back" The discussion was led by Dr E B Probasco and Dr Leroy J Butler Thirty-two members attended the dinner and 50 were at the meeting

#### Westchester County

Descriptions of new laboratory and radiographic methods featured the 389th meeting of the Mount Vernon Medical Society at the Knolls, on April 11

Dr A. A Eggston talked on "Clinical Significance of the Newer Laboratory Procedures," while Dr L B Groeschel discussed "Clinical Application of Radiographic Procedures" Forty-two members attended the session, which was conducted by Dr Harold M Herring, president.

#### Yates County

Dr Donald J Tillou, Elmira surgeon, addressed a joint meeting of the Yates County Medical Society and the staff of Soldiers and Sailors Memorial Hospital, on April 8 in the Wagner Hotel in Penn Yan on "Conditions of the Chest."

Dr Tillou came at the invitation of Dr Allen Holmes, president of the county society, who presided over the dinner gathering

### Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Michael G Caturani	76	Naples	February 24	Manhattan
Joseph A. Cox	60	Albany	April 23	Albany
Michael J Foran	66	Buffalo	April 5	Ithaca
George F Gardner	82	Albany	April 14	Ellisburg
Edward Holtz	37	Univ & Bell	February 21	Manhattan
Anselme E Houle	67	Albany	January 21	Cohoes
Nereus C Kemp	78	Chicago Med	January 18	Scarsborough
Nathaniel Love	81	N Y Univ	March 10	Elmira
Frederick G Metzger	57	Buffalo	April 9	Carthage
Addison R Miller	—	Albany	February 19	Nassau
Leo V Rosenthal	55	Univ & Bell	January 13	Mountain Dale
Wellington M Ross	62	Buffalo	January 11	Buffalo
Benjamin H Searing	61	Cornell	April 15	Newburgh
T Selden Stewart	88	Michigan	February 23	Buffalo
William T Tanner	—	Buffalo	December 4	West Danby
William C Wright	77	Jefferson	March 23	Buffalo

### PHI DELTA EPSILON BANQUET

The Phi Delta Epsilon Medical Fraternity announces an "A M.A." informal banquet to be held in the Sert Room of the Waldorf-Astoria, Wednesday evening, June 12 Several hundred

members and their wives will attend A group of life members will be awarded twenty-five-year service keys and scrolls Aaron Brown, 39 W 55th St., New York, is in charge of reservations



# Hospital News

## Publicity as a Duty for the Hospital

**P**UBLICIZING of outstanding work of saving human life and lightening human misery in hospitals is recommended by Carl P. Wright, superintendent of Syracuse General Hospital and secretary of the New York State Hospital Association, in an article published in *The Digest*, Syracuse General Hospital publication, in March.

He writes

"Recently I had the pleasure of speaking before a group of insurance executives on the subject of 'Hospitals,' and the information which I was able to give this group was so gladly received that I have come to the conclusion that we in the hospital field are too prone to surround our work with a degree of mystery and that we should publicize both the amount of and the splendid work which is being accomplished."

### Public Interested

"Hospital and medical care is a highly specialized business and we who are intimately concerned with it accept the work and results as a matter of course without fully realizing what it means to the general public and how interested they would be if they knew about it.

"For instance, the general public does not know that 29,216 men, women, children, and infants received care in the five approved Syracuse general hospitals in 1939. Assuming Syracuse's population at 210,000, that means that one out of every seven received some hospital care in these five institutions during the 12 months of last year. Thirty-three hundred and four infants were born in these hospitals, 15,133 operations were performed, 1,068 deaths occurred, and 194,875 laboratory tests were made. A grand total of 320,208 patient-days' care resulted."

### Public Provides Funds

"Long tradition prohibits the mention of a physician or surgeon in the publicizing of any achievement. Behind this barrier the hospital executive sits complacently and assumes, I don't know how, that the public will in some way know all about what is going on in his or her particular institution. When some public appeal is made for hospital funds, the same executive is amazed to find that in reality, the public knows very little about the institution. It is only when some enterprising news reporter gets wind of a particular story which he thinks is of public interest and descends on the hospital with his photographer that we realize that perhaps after all, the general public might be interested.

"It is my carefully considered opinion that we must be much more cooperative with the public press and must develop the publicity angle of our work. If we preach as we do, that the public, in the last analysis, owns the voluntary hospitals of this city, then we must agree that they should be apprised of what is going on in their institutions."

## Friendly Community Spirit

"One cannot help but notice the intimate items in the country newspaper. Mrs. Jones has just recovered from an appendectomy, the Smiths have just had a blessed event, little Johnnie Jones broke his leg sliding down Square Perkins's big hill, etc. The reason that these items are published is because the friendly nature of the inhabitants demands to know what is happening to their neighbors. It all helps in the development of the friendly community spirit, which, after all, is the real life.

"During my many years of hospital service I have seen patients brought into the hospital desperately sick or injured, and I have also seen many of them leave recovered and ready to again take their place in the community life. Many times their recovery has been almost miraculous, and only those on the inside know that by almost superhuman work of doctor and nurse has this been accomplished. Take, for instance, the new drug, sulfanilamide, the fullest extent of whose properties has not as yet been developed. Watching its effects on the most seriously ill patient within an almost unbelievable brief space of time, one may be forgiven if he commences to believe in miracles. I wonder if the general public understands the remarkable progress that has been made in scientific medicine and hospitalization. I again wonder if it is not our duty to tell them about these things."

## Would Better Relations

"The newspapers are full of the tragedies of life: the war in Europe and Asia, the divorce of this one and that one, the state budget, the everthings which crush one in mind and heart. Why not talk about the glad things the new babies that our young couples have just welcomed into the world, the joy over the fact that one of our prominent citizens has just recovered from a serious illness or accident.

"Why not publicize the further fact that these happy endings occur because we are fortunate in this city in having a fine group of well trained physicians, surgeons, obstetricians, and nurses and five of the best hospitals in the land? It is the truth, and how much more neighborly our relations would be if we were to share our joys and knowledge together."

## The General Practitioner in the Hospital

**T**HE general practitioner too often bowed out of the hospital by the specialist, deserves better treatment, in the opinion of Dr. Morris Fishbein, editor of the *J.A.M.A.* He should have 'a voice in the conduct of the medical affairs of the hospital and the fullest benefits that the hospital can confer upon those included as members of the staff,' declared Dr. Fishbein addressing a Methodist Hospital staff meeting at Indianapolis on January 19. To quote:

Today the hospital acts as the center for all the medical functions including, first, care of the sick; second, teaching of doctors and nurses,

third, education of the community in the prevention and care of disease, and fourth, investigation or research. Obviously any physician who wishes to progress in his work or at least, to keep abreast of scientific advancement, must have association with such an institution.

"There are both open-staff and closed-staff hospitals. Certainly hospitals devoted almost wholly to teaching and research and which care for the sick primarily in relationship to teaching and research may have closed staffs. But every other hospital must fulfill its obligations to the community by making its facilities fully available to qualified men.

"Unfortunately, it has been the tendency, because of the rise of specialization, to organize hospitals according to the specialties and to group these as internal medicine, surgery, obstetrics, leaving the general practitioner a possibility of affiliation only as a member of the courtesy staff or as associate in some group to which he devotes a little more attention.

"The injudiciousness and uneconomic aspects of this attitude should be apparent. The family doctor thus becomes merely a feeder for groups of specialists and is discouraged from following his own patients outside their homes and beyond a certain stage in the evolution of disease. He fails to receive the intimate advantages of pathologic conferences and the teaching functions of the hospital. He may indeed be deterred from referring patients, when required, to the specialist because of the fear that patients may there-

after attempt to go directly to the specialists.

"It is a wise concept that would make the general practitioner an integral unit in the organization of the hospital staff, providing in this way for continuous contact and follow-up on his patient, for conference with consultants, and opportunity for graduate education. More important, however, for the practitioner is maintenance of his prestige with his patients. Patients have come to demand affiliation with a recognized hospital as a warranty of dependability in a physician.

"Today in the United States there are some 165,000 doctors licensed to practice medicine. Of these there are about 145,000 actually in practice. More than 118,000 are members of the American Medical Association. More than 100,000 are associated in some capacity with hospitals and may use the available facilities. But we seek for them more than just the opportunity to send in a patient.

The general practitioners constitute at least seventy to seventy-five thousand of the available practitioners of scientific medicine. We seek for them a voice in the conduct of the medical affairs of the hospital and the fullest benefits that the hospital can confer upon those included as members of the staff. With such recognition the time may well come when the rewards of the general practitioner, in satisfaction of a job well done, in recognition of his service, may help to compensate him for the unending hours of toil that are his lot."

## Newsy Notes

Growth of the three-cents-a-day hospital plan of the Associated Hospital Service of New York to the point where it is paying about \$8,000,000 yearly for the hospital care of subscribers is cited in the annual financial statement of the nonprofit organization.

The statement shows assets of \$4,198,220.26, and as of December 31, 1939, its financial condition, determined by the State Department of Insurance, shows a surplus of \$1,651,249.71 available for the added protection of subscribers.

The enrollment of more than 1,350,000 subscribers now covers one out of every six persons in the New York metropolitan area, the report states, enrollment having increased more than a quarter of a million during 1939.

According to David H. McAlpin Pyle, chairman of the board of directors, the service has again received the annual certificate of approval awarded by the American Hospital Association to hospital service plans that show evidence of progress sound administrative policies and procedures, and a financial position that protects the interests of subscribers.

The plan established five years ago and revised somewhat in the past year in the form of a contract to conform with actuarial experience gained since then, is the largest of sixty such approved group hospitalization services in the country.

Nearly 40 per cent of the people of Rochester are protected by hospital service contracts, reports the *Rochester Times Union* which re-

marks that this is a tremendous percentage for any type of voluntary participation in any organization or undertaking.

Rochester leads all of the larger plans in percentage of population enrolled, the annual report of the Rochester Hospital Service Corporation shows.

Administration costs have been kept down rates rank with the lowest among the 56 nonprofit plans in this country. Coverage is also exceptionally wide in proportion to rates.

Benefits have been increased as and when experience showed this to be possible without impairing soundness, now assured by a reserve of approximately \$250,000. In 1938 for example, full coverage was extended to the first dependent.

But the most important thing for subscribers and for the whole community believes the Rochester paper, is that today thousands of persons receive hospital care who might otherwise be without it.

That shows that the Rochester Hospital Service Corporation by its plan offering a convenient way of providing against sudden need of hospital care is making a substantial contribution to raising the health standards of the community.

Supreme Court Justice James T. Hallinan, of Flushing, presented nine Queens hospitals with oxygen tents at a ceremony in the Queens Elks Club, Elmhurst, on behalf of the fraternal order's welfare committee, on March 19.

With each of the oxygen tents which cost

\$500, went a \$100 check for the purchase of oxygen. Judge Hallman, past exalted ruler of the Queens lodge and former national leader of the Elks, expressed the hope that the first to benefit from the new equipment would be "patients who could not afford to pay."

The nine hospitals that received the gifts were St. John's, Long Island City, Wyckoff Heights, Ridgewood, Flushing Hospital, Queens General, Jamaica, Jamaica Hospital, St. Joseph's, Far Rockaway, Rockaway Beach Hospital, St. Anthony's, Woodhaven, and Mary Immaculate, Jamaica.

Hospital superintendents of Troy and vicinity met for a conference on March 7 at the Leonard Hospital in Troy. Financial problems were the topic of discussion.

The New York Orthopaedic Dispensary and Hospital has joined the progressive institutions of the greater city by installing a physical therapy department with Dr. William Benham Snow as consulting director.

Organization of a grievance committee among employees of the Willard State Hospital has been announced by Dr. John H. Travis, superintendent.

This group is made up of Miss Esther Carroll, supervisor, Mrs. Leona Bell, charge nurse, Vergne Trask, supervisor, Arthur Woods, supervisor, William McAvinney, storekeeper, Paul Ryan, accountant, and Joseph Schramm, chef.

The Bath Memorial Hospital came through the year 1939 "in the black" with the year's receipts exceeding expenditures by \$2,958.09, the annual report reveals. Expenditures for the

year included \$4,358.75 reduction of indebtedness.

The report, submitted by James Faucett, hospital business manager, listed receipts of \$77,509.15 and expenditures of \$74,551.06.

Members of the staff of Kingston Avenue Hospital of the Department of Hospitals, Brooklyn, gave a dinner on March 2 in the New York Academy of Medicine in honor of Dr. Emily Dunning Barringer, the first woman ambulance surgeon in New York City, who is retiring as director of gynecology after twenty-one years of service to the hospital.

A total of 287,861 laboratory tests were made at Meyer Memorial Hospital, Buffalo, during the last year, it is announced by Dr. David K. Miller, head of the hospital's research division. Virtually all of this laboratory work was done without charge to the patients.

Laboratory tests for syphilis during the last year totaled 52,542, one of the most important phases of the research department's work.

Making an average of 2,500 exposures a month and taking care of more than 12,000 patients a year, the x-ray department of Meyer Memorial Hospital is reported doing one of the biggest jobs of its kind in this part of the country.

The nurses' home at the Rome Hospital has been discontinued for economy.

Discontinuance of the nurses' home makes a total of three buildings which will be abandoned with the opening of the new hospital. The other two structures are the old Rome Hospital on E. Garden Street and Murphy Memorial Hospital on W. Embargo Street.

These buildings, it is believed, will revert to the board of managers and in time be turned over to the city.

## Improvements

Through the combined efforts of four New York City departments, Bellevue Hospital will soon be using a new grassed area of 124,000 sq. ft. extending from Twenty-sixth to Thirtieth streets along the East River front.

Huntington Hospital inaugurated a new service on March 12 when a Tumor Diagnostic Service was begun, to continue bi-monthly thereafter.

Dr. Norman Treves, associated with Memorial Hospital, New York City, will direct this

service. It will have the support of the Suffolk County Cancer Committee.

An x-ray machine has been presented to the Arnold Gregory Memorial Hospital at Albion by the Sheret Post, American Legion.

A laboratory is being added to the Veterans Memorial Hospital at Ellenville.

The Van Duzee Hospital at Gouverneur is contemplating enlargement.

## A M A MEETING

During the week of June 10, 1940, the American Medical Association will hold their annual meeting in New York City.

The Medical Society of the County of New York and the Medical Society of the State of New York will be hosts to their fellow doctors from all parts of the United States.

The Local Committee on Arrangements urges you to register as a member of the American Medical Association on Monday, June 10, at the

Registration Booth at the Grand Central Palace.

Every member of the American Medical Association who registers will receive an official button. By means of this badge many special privileges are made available, such as admission to all the Sessions, tickets to broadcasts, theater tickets at reduced rates, lower admission rates to the World's Fair, and admissions to some of the concessions at the World's Fair.

# Medicolegal

LORENZ J. BROSNAN, ESQ.

Counsel, Medical Society of the State of New York

## Physical Examinations in Personal Injury Actions

THE Civil Practice Act of the State of New York specifically provides, in Section 306, that in actions brought to recover damages for personal injuries, where the defendant is ignorant of the nature and extent of the injuries alleged the plaintiff may be required to submit to a physical examination by a physician or surgeon appointed by the Court. The Statute specifies that where the person to be examined is a female, she shall be entitled to have the examination made in the presence of her personal physician.

The Statute, however, does not specifically enumerate or limit the type of physical examinations to which a plaintiff may be subjected, other than to say that "such examination shall be had and made under such restrictions and directions as to the Court or Judge shall seem proper." A number of decisions have been handed down by the Court interpreting the scope of the remedy so provided by the Civil Practice Act.

Very recently, in an action to recover damages for personal injuries, the defendant applied to the Court for an order directing a female plaintiff to submit to a physical examination which would include, as a part thereof a cystoscopic examination.\* As a part of the application, defendant submitted the affidavit of a medical expert which set forth that the said physician had never known of a case in which, from a cystoscopic examination, there had been any very harmful serious or fatal results nor a fatality resulting simply from a cystoscopic examination," and furthermore that such examination "cannot be compared. in seriousness with a major operation."

The motion was opposed on behalf of the plaintiff, and the papers in opposition included an affidavit of another physician, who, on the contrary, contended that a cystoscopic examination was "a major operation. most painful and has been known to cause death." The Court at Special Term denied the application so far as the same included a request for an order requiring a cystoscopic examination. An appeal was taken to the Appellate Division of the Supreme Court for the Fourth Judicial Department and that Court, upon the record before it, refused to inter-

pret the Statute so as to permit the particular examination sought. In so ruling the Court said, in the course of its opinion:

"In asking for a cystoscopic examination of plaintiff the appealing defendants are asking us to go much further than our courts have ever gone in subjecting a party to physical pain and danger to health."

As recently as 1923, the Appellate Courts of this State had refused to require a plaintiff to submit to x-ray photographs. The rule so adopted, however, was subsequently modified, it appearing in two decisions that the Appellate Courts were satisfied that the science of taking x-ray pictures has been so perfected as to entirely eliminate, for all practical purposes, danger of injury incident to the taking of such pictures.\* Apparently the Courts have now come to the conclusion that the taking of x-rays is no more harmful or dangerous than the taking of ordinary photographs.

It has also been ruled that in a proper case, the Statute may be interpreted to permit the taking of a sample of the plaintiff's blood for the purpose of examination and analysis.\*\*

It is interesting to note that the Court, in so deciding, did so in spite of contentions that infection sometimes is caused by a needle puncture such as is required to draw sufficient blood for a blood examination.

In an action to recover for personal injuries, where plaintiff contracted a respiratory disease or poison, the question arose as to whether a physical examination should include requiring the plaintiff to submit to a breathing test referred to as the "oxygen dilution method of Christie."† In that case the Court denied the particular examination desired, stating as its reason that it was not convinced by the record that the test could be made with safety to the plaintiff, and that it was not in a position to take judicial notice of the safety of the test. Likewise, it has been held, for similar reasons, that an application on behalf of the defendant to require a plaintiff to submit to the taking of a barium meal as part of a physical examination should be denied.††

\* *Hollister v. Robertson* 208 App. Div. 449. *Gilbert v. Clair* 223 App. Div. 200.

\*\* *Hayt v. Brewster Gordon & Co. Inc.* 199 App. Div. 68.

† *Griff v. Mathieson Alkali Works Inc.* 243 App. Div. 853.

†† *Bartolotta v. Delco Appliance Corporation* 254 App. Div. 809.

\* *Carrig v. Oakes* 259 App. Div. 138.

## AMERICAN ASSOCIATION OF INDUSTRIAL PHYSICIANS AND SURGEONS

The Association will hold its annual convention in New York City on June 4, 5, 6, and 7, 1940, and will have its headquarters at the Penn-

sylvania Hotel. An interesting scientific program is being arranged and extensive plans for entertaining doctors and their wives

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue Brooklyn, N. Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers.

## RECEIVED

**Cancer in Childhood and a Discussion of Certain Benign Tumors.** Edited by Harold W Dargeon, M D. Quarto of 114 pages, illustrated. St Louis, C V Mosby, 1940. Cloth, \$3 00

**Diverticula and Diverticulitis of the Intestine.** Their pathology, diagnosis, and treatment. By Harold C Edwards, F R C S. Octavo of 335 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$8 00

**Fractures and Other Bone and Joint Injuries.** By R Watson-Jones, F R C S. Octavo of 723 pages, illustrated. Baltimore, Williams & Wilkins Co., 1940. Cloth, \$13 50

**A Textbook of Physiology.** By William D Zoethout, Ph D., and W W Tuttle, Ph D. Seventh edition. Octavo of 743 pages, illustrated. St Louis, C V Mosby Co., 1940. Cloth, \$4 50

**The Hypothalamus and Central Levels of Autonomic Function.** Volume XX of Research Publications of Association for Research in Nervous and Mental Disease. Proceedings of the Association December 20 and 21, 1939. Octavo of 980 pages, illustrated. Baltimore, Williams & Wilkins Co., 1940. Cloth, \$10

**Tuberculosis and Social Conditions in England with Special Reference to Young Adults. A Statistical Study.** By P D'Arcy Hart and G Payling Wright. Octavo of 165 pages. London, National Association for the Prevention of Tuberculosis, 1939. Paper, 3 shillings

**Through the Years. An Autobiography.** By Nathan S Jonas. Octavo of 365 pages. New York, Business Bourse, Publishers, 1940. Paper, \$3 00

**Diabetes. Practical Suggestions for Doctor and Patient.** By Edward L Bortz, M D. Second edition. Octavo of 296 pages, illustrated. Philadelphia, F A Davis Co., 1940. Cloth, \$2 50

**Synopsis of Obstetrics.** By Jennings C Litzenberg, M D. Duodecimo of 394 pages, illustrated. St Louis, C V Mosby Co., 1940. Cloth, \$4 50

**Diagnosis and Treatment of Diseases of the Hair.** By Lee McCarthy, M D. Octavo of 671 pages, illustrated. St Louis, C V Mosby Co., 1940. Cloth, \$9 50

**Arthritis and Allied Conditions.** By Bernard I Comroe, M D. Octavo of 752 pages, illustrated. Philadelphia, Lea & Febiger, 1940. Cloth, \$8 50

**Treatment of War Wounds and Fractures With Special Reference to the Closed Method as Used in the War in Spain.** By J Trueta, M D. Duodecimo of 146 pages, illustrated. New York, Paul B Hoeber, Inc., 1940. Cloth, \$2 50

**Chemotherapy and Serum Therapy of Pneumonia.** By Frederick T Lord, M D, Elliott S Robinson, M D and Roderick Heffron, M D. Octavo of 174 pages, illustrated. New York, The Commonwealth Fund, 1940. Cloth, \$1 00

**Introduction to Medicine.** By Don C Sutton, M D. Octavo of 642 pages, illustrated. St. Louis, C V Mosby Co., 1940. Cloth

**Modern Medical Therapy in General Practice.** Edited by David P Barr, M D. Three volumes. Quarto of 3,661 pages, illustrated. Baltimore, Williams & Wilkins Co., 1940. Cloth, \$35 per set

## REVIEWED

**Injuries of the Skull, Brain and Spinal Cord. Neuro-Psychiatric, Surgical, and Medico-Legal Aspects.** Edited by Samuel Brock. Octavo of 632 pages, illustrated. Baltimore, Williams & Wilkins Co., 1940. Cloth, \$7 00

As would be expected from the names of the contributors to this volume, the subject is covered in a thoroughly authoritative manner. There is of necessity some overlap and repetition. Where points of pathology or treatment are debatable, these facts are brought out by the authors. The lack of universal agreement on the exact connotation of concussion is reflected in the various points of view expressed. The editor, by his introduction and footnotes, succeeds in making the volume a harmonious whole.

The chapters on the relation of trauma to other diseases of the brain and cord are in line with conservative present-day thoughts. This same conservative point of view is, however, exhibited by each author. The chapters by C P Symonds and A R Elvidge are highlights in this collection of monographs in miniature, all of merit. The bibliographies add to the com-

pleteness of the volume and enhance its value as a text or reference book.

IRA COHEN

**Obstetrical Practice.** By Alfred C Beck, M D. Second edition. Quarto of 858 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$7 00

In his second edition of *Obstetrical Practice* Dr Beck has retained all of the excellent features of the original work, and has added much new material, especially in the fields of embryology and physiology. The role played by various hormones in producing changes in the maternal organism is presented in a clear and understandable manner. The chapters on abortion and toxemia of pregnancy have been elaborated, and a new chapter, "Retained and Adherent Placenta," has been added. In several instances the same material is found repeated in different chapters of the text. This, however, may have been intentional, for it is certain that the student gains much by repetition. This book is most

heartily recommended to all practitioners of medicine as well as to all undergraduate students

WILLIAM A JFWETT

**The Therapeutics of Internal Diseases.** Edited by George Blumer, M D Volume I Quarto of 872 pages, illustrated Volume II Quarto of 1,042 pages, illustrated New York, D Appleton-Century Co, 1940 Cloth, \$10 per volume.

This is a new and comprehensive work which will be in four volumes when all have appeared. Volume one considers the underlying principles of therapeutics and various special technical procedures. Nutrition, dietetics, medical climatology, heat, light, and electrotherapy are some of the subjects treated. Barach contributes a chapter on the therapeutic use of gases. In the second section such subjects as parenteral therapy, blood transfusion, and spinal puncture are discussed.

Volume two comprises three sections—pharmacology, general management of the sick, and infectious diseases. All these subjects are discussed in the considerable detail permitted by the size of the work. The many advances of recent years in the treatment of the infectious diseases of bacterial, virus, or rickettsial origin, receive adequate attention by various well-known authors. The groups of typhus fever, Rocky Mountain spotted fever, Japanese River fever, and trench fever are the rickettsioses comprising a chapter by Blumer.

Together the first two volumes are of about 1,800 pages furnishing a wealth of information for reference.

W E McCOLLOM

**Diagnosis and Management of Diseases of the Biliary Tract.** By R. Franklin Carter, M D, Carl H. Greene, M D, and John R. Twiss, M D Octavo of 432 pages, illustrated Philadelphia, Lea & Febiger, 1939 Cloth, \$6 50

Three of America's foremost authorities on the subject have collaborated in producing what is undoubtedly destined to be the standard text on diseases of the biliary tract. The success of this book attests, too, to the value of a clinic devoted to the study of diseases by combined medical, surgical, and laboratory staffs such as the authors have been conducting for some years at the New York Post-Graduate Hospital.

The book is small enough to be reasonably priced, yet the scope is broad and the treatment thorough. An introduction, covering briefly the history of our knowledge of the biliary tract, is followed by a section over one hundred pages devoted to practical considerations concerning etiologic factors. Physiology of the gallbladder, jaundice, formation of stones, hepatic function tests are some of the chapters comprising this section. Part II is an unusually instructive account of diagnostic methods including such matters as the technic of duodenal drainage, bacteriologic study and x-ray investigation. Part III is devoted to medical management and Parts IV and V to surgical management and follow-up experience. Diets are given in detail throughout the text, and there is a useful appendix of tables of food values. There are ex-

haustive bibliographies at the end of most chapters for the benefit of special workers.

The book is deserving of the warmest praise. It will be welcomed by medical men, surgeons, and all who are called upon to manage one of the most common of mankind's ailments, a category that surely includes the vast majority of all medical practitioners.

MILTON PLOTZ

**Textbook of Medicine.** By various authors. Fourth edition edited by J J Conybeare, M C Octavo of 1,112 pages, illustrated Baltimore Williams & Wilkins Co, 1939 Cloth, \$6 75

This edition contains two additional sections, one on Psychological Medicine, of about one hundred pages, and one on Lymphogranuloma Inguinale in the venereal disease section. Protamine zinc insulin is described, an account of regional ileitis added, and changes made in the cardiovascular and the neurologic sections. Hypertensive encephalopathy is mentioned briefly.

A wide field is covered, greater than is generally attempted in American books, including, in addition to the usual subjects found in books on internal medicine, venereal diseases and diseases of the skin. This has some advantage for reference, but many of the articles are necessarily so brief that they do not furnish much information. However, prominent English authors, many from Guy's Hospital, write authoritatively and have produced a useful book.

W E McCOLLOM

**Treatment in General Medicine.** Edited by Hobart A Reimann, M D. In three volumes, and desk index. Octavo of 2,834 pages, illustrated Philadelphia, F A Davis Co, 1939 Cloth, \$30

The review of a three-volume work must be accomplished by the method of random sampling. The reviewer must delve into parts of the book about which he has special knowledge and derive his opinions therefrom. In this instance, the impression is gained that a sound work has been produced which ought to be of real value to the general practitioner and to the internist alike. The section on the treatment of pneumonia is well handled and contains a good description of the use of antipneumococcus serum. Even though published in 1939, the author manages to get in a short section on the use of sulfapyridine. This fact, however, points out the great drawback to the publication of a bound edition on the treatment of disease. New methods come so rapidly that it is not long before the authors must get out another edition. For that reason this reviewer much prefers the looseleaf system. In places in the work there is evidence of lack of attention to important details. For instance acetyl-beta-methyl-choline is advised in the treatment of auricular paroxysmal tachycardia, and yet no mention is made of the violent reaction that this drug may produce or of the necessity of having a syringe containing atropine sulfate ready for immediate use to stop the vagus action when it goes beyond the point desired.

EDWIN P MAYNARD, JR.

**Peripheral Vascular Diseases. Diagnosis and Treatment.** By William S Collens, M D, and

Nathan D Wilensky, M.D Octavo of 248 pages, illustrated Springfield, Charles C Thomas, 1939 Cloth, \$4 50

This small, well illustrated monograph considers anatomic, physiologic problems, methods of examination, and pathologic conditions of the blood vessels

In special chapters the authors discuss the more common obliterans of vascular diseases They present therapy at considerable length and take up various surgical methods of treatment. They devote short chapters to the treatment of embolus and varicose ulcers

The book summarizes, in brief because of space limitations, the known facts of the common vascular lesions, their diagnosis and treatment

The authors do not pretend to have added much that is new from any angle but rather to have summarized their conclusions that have been based on an extensive experience

The book should serve as a splendid short handbook for the general practitioner

ROBERT F BARBER

Clinical Tuberculosis Edited by Benjamin Goldberg, M D In two volumes Second edition Quarto, illustrated Philadelphia, F A Davis Co, 1939 Cloth, \$15

This is a second revised edition containing a complete revision of the text matter on epidemiology, together with additions on the subjects of chest surgery, endobronchial tuberculosis, and a new chapter on tuberculosis in industry

A detailed review of this book was published when the first edition appeared The revised and new portions are well documented and presented in very lucid form The subject of tuberculosis in industry is a highly controversial one at the present time There is much in this presentation which is not in accordance with the belief of the majority of authorities, both clinical and pathological

FOSTER MURRAY

Injection Treatment of Hernia, Hydrocele, Ganglion, Hemorrhoids, Prostate Gland, Angioma, Varicocele, Varicose Veins, Bursae, and Joints. By Penn Riddle, M D Quarto of 290 pages, illustrated Philadelphia, W B Saunders Co, 1940 Cloth \$5 50

As is stated in the preface "It is the purpose of this book to include all those conditions to which the injection method of treatment may properly be applied Only those conditions amenable to injection treatment (as substantiated by adequate series of cases) will be considered" Of the 270 pages, exclusive of a full index, some 90 pages are devoted to the application of this type of treatment to the cure of hernias About 77 pages are given to varicose veins, and 54 pages to hemorrhoids The history, anatomy, pathology, kinds of sclerosing agents, indications and contraindications, complications, and results are fully described and adequately illustrated

The percentage of successes of those favoring this type of treatment for hernias is, from the analysis of certain series, very high, 90 per cent and more, though one unfavorable report from New York City was only 19 per cent in a series

of 56 cases The importance of a careful selection of cases is emphasized This book is evidently a serious effort to evaluate the treatment of certain conditions by the injection of sclerosing agents and to make the use of this form of treatment available to the careful, regular practitioner

J RAPHAEL

An Introduction to Gastro-Enterology Being the Third Edition of the Mechanics of the Digestive Tract by Walter C Alvarez Quarto of 778 pages, illustrated New York, Paul B Hoeber, Inc, 1940 Cloth, \$10

This is undoubtedly the best book the author has written Getting away from the highly theoretical and impractical mood which inspired his book, *Nervous Indigestion*, he has returned to the field in which he has excelled and in which he did investigative work which revolutionized the previously existing ideas regarding gastrointestinal physiology and provided a physiologic approach to the treatment of gastrointestinal diseases The new book, really an enlarged and amplified edition of the original *Mechanics of the Digestive Tract* should be read from cover to cover by anyone attempting to treat alimentary tract diseases When he has done this he will cease to employ most of the old empirical treatments and will be able to work out physiologic methods for the control of the symptoms of gastrointestinal disease This book should be the bible of the gastroenterologists

A F R. ANDRESEN

A Textbook of Surgery By American authors Edited by Frederick Christopher, M D Second edition Quarto of 1,695 pages, illustrated Philadelphia, W B Saunders Co, 1939 Cloth, \$10

The second edition of this splendid textbook of surgery has been edited To those who have used this book and enjoyed the well-rounded handling of the major problems of surgery, the new edition meets an enthusiastic reception

For those who do not know, this text is a monographic system of surgery in which the problems under discussion are considered by recognized masters of the subject Some of the sections have been revised in order to keep them up to date Several new sections have been added These sections are of definite benefit in the rounding out of the subject matter

This text should be regarded as one of the finest and most authoritative textbooks of surgery in the English language, and we recommend it with enthusiasm to the profession

ROBERT F BARBER

Practical Obstetrics. By P Brooke Bland, M D, and Thaddeus L Montgomery, M D Third edition Quarto of 877 pages, illustrated Philadelphia, F A Davis Co, 1939 Cloth, \$8 00

The third edition of this book compares favorably with its predecessors In general the arrangement and content is like most textbooks on obstetrics, except that a chapter on obstetric jurisprudence is included In his classification of the toxemias Bland follows Stander and so the

term "low reserve kidney" carries on. The discussion of resuscitation is good, yet it is too bad that illustrations of rough antiquated methods are still shown. Bland prefers cesarean hysterectomy to the extraperitoneal operations, advocates posterior colpotomy in the diagnosis of ectopic, and believes that the uterine pack is the most dependable method of controlling postpartum hemorrhage. The old classification of pelvic anomalies is stressed and x-ray for diagnosis is but touched upon. One wonders why it is necessary to mention in a textbook for students that Potter had delivered 20,000 babies up to 1931. The book is profusely and well illustrated a beautiful volume.

CHARLES A. GORDON

**Cardiovascular Diseases Their Diagnosis and Treatment.** By David Scherf, M D., and Linn J. Boyd M D. Octavo of 458 pages. St. Louis, C V Mosby Co., 1939. Cloth, \$6.25.

This interesting volume should be valuable to American readers because it is clearly a portrayal of the Viennese point of view in cardiology. Its title is a little misleading, because it is not a systematic treatise on the diagnosis and treatment of cardiovascular diseases but rather a series of chapters on subjects that have been of special interest to the authors. For that reason the arrangement of the material follows no detectable system and reminds one of the confusing presentation of cardiovascular disease in the older American textbooks. This is unfortunate for the student and the general practitioner to whom the book is addressed.

The presentation of the subject of pulmonary embolism is timely and calls attention to the importance of thrombosis in the deep veins of the legs as the source of infarcts in the lung in decompensated patients. It is the reviewer's opinion that the authors overemphasize the importance of aortalgia as a syndrome indicative of syphilitic aortitis. Now that syphilitic coronary ostial stenosis is recognized, the validity of aortalgia as a symptom of syphilitic aortitis comes into question.

Digitalis therapy is presented from the European point of view, and the administration of this drug by rectum using suppositories or tincture of digitalis in tap water is given as the preferred method. The description of the use of strophanthin is valuable because of the greater experience of continental physicians with this drug.

EDWIN P. MAYNARD JR

**Sclerosing Therapy. The Injection Treatment of Hernia, Hydrocele, Varicose Veins and Hemorrhoids.** Edited by Frank C. Yeomans M D. Quarto of 337 pages illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth \$6.00.

Recent advances in the use of sclerosing therapy makes a monograph of this character timely. The book is divided into four parts consisting of the injection treatment of hernia, hydrocele, varicose veins, and hemorrhoids. Each section is written by a collaborator experienced in his own field.

The authors' statement that sclerosing therapy has emerged from the stage of experiment and empiricism to be established now on a sound

scientific basis cannot be quite accepted as applying to the injection treatment of hernias. It is justifiably stressed by the contributor however, that sclerosing therapy is not intended to supplant surgery but rather to complement it.

Each condition is well presented and contains a detailed account of the etiology, anatomy, pathology, clinical picture, selection of cases, and technic of injection.

The material is profusely illustrated with excellent drawings and photographs. A large variety of sclerosing agents is presented and evaluated. Indications, contraindications, results, and legal aspects are discussed.

Anyone interested in this mode of therapy will find the book indispensable.

WILLIAM S. COLLENS

**Physiology of the Uterus with Clinical Correlations.** By Samuel R. M. Reynolds, M A. Octavo of 447 pages, illustrated. New York, Paul B. Hoeber, Inc., 1939. Cloth, \$7.50.

The investigation and knowledge of the physiology of the uterus until the publication of this volume have been scattered in books, magazines and brochures in several branches of medical science, and for those interested in this subject it was indeed a task to wade through a mass of literature for the facts sought.

Endocrinologists, investigators in the field of reproduction, and clinicians will find this a valuable work. The author has spent many years in the study of reproduction and in animal and experimental research, and so his opinions and observations are to be reckoned with seriously, even though some conclusions may be at variance with other investigators.

The material is divided into thirteen chapters, and the field covered includes uterine motility in animals and humans, innervation of the uterus, its blood and lymph supply, intrauterine fetal respiration, uterine metabolism, and a chapter on the physiologic basis of the treatment of uterine muscle disturbances. In the chapter on the hormone therapy of uterine muscle, the author attempts to correlate the physiologic observations with practical clinical experience of various gynecologists.

The author not only gives his own observations and interpretations but also encompasses with fine understanding a summation of the literature on the subject. The bibliography of this literature comprises 1,190 references, in itself a task of proportions and a valuable adjunct to workers in this field.

The book is highly recommended not only to workers in the fields of reproductions but also to those obstetricians and gynecologists who want to know the "why" and "wherefore" of their methods and therapeutics.

JACOB HALPERIN

**Recent Advances in Haematology.** By A. Pincus, M D. Fourth edition. Octavo of 312 pages, illustrated. Philadelphia, P. Blakiston's Son & Co., 1939. Cloth, \$5.00.

This book hardly needs an introduction, since previous editions have firmly established its place in the field of hematology. The reviewer has only words of praise for it.

In a way, the title *Recent Advances in Haematology* is misleading, since the book is not merely



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# NEW YORK STATE JOURNAL *of* MEDICINE

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## *Editorial*

### Too Many Cooks

A mandate of the House of Delegates at its one hundred thirty-fourth session created a subcommittee of three members of the Council charged with the sole duty to consider problems of "medical relief." This action may well have far-reaching consequences. A small body of men selected for their background of knowledge of the intricacies of medical welfare, with a sense of proportion and a judicious admixture of good humor, should be able to progress rapidly.

Too many cooks, some of questionable competence in the field, have stirred the medical welfare broth for too long a time. Indications of spoilage are becoming noticeable even to the hypocritical dependency. It has no choice, unfortunately, but to take that which is provided and like it.

The new subcommittee of the Council starts unhampered by any necessity to divide its attention. Consideration of medical welfare service in this state is not in any sense a part-time occupation. The State Department of Social Welfare, by its rules and regulations and the institution of welfare itself, which is a living thing, controls, influences, and molds the lives of a vast multitude. It is a subtle, conditioning power that is even now creating, in part, the state of the future. The first great wave of immigration created our democracy through revolution. The second, in the nineteenth century, laid the foundations for many of our present welfare problems, particularly in the industrial areas. It is to be devoutly hoped that the solution of these problems will not proceed by further erosion of democratic principles of government, along the path of federalized control or of compulsory health insurance.

In the last analysis, it is the physician who must make medical service effective. Let that be understood by politicians and sociologists—and civil service employees—alike. This fact will be well

a review of the recent literature but actually serves as an excellent textbook of hematology. The presentation is simple and logical, and the material is presented in an interesting fashion. The colored plates of blood cells and bone marrow are clear and instructive, and in addition there are many good black-and-white illustrations. The illustrative cases cited from the author's experience are highly instructive. The book should, therefore, serve not only as an excellent introduction to the subject but also as a valuable aid to specialists in the field.

A S WIENER

**The Newer Knowledge of Nutrition** By E V McCollum, Ph D, Elsa Orent-Keiles, Sc D, and Harry G Day, Sc D. Fifth edition. Octavo of 701 pages, illustrated. New York, The Macmillan Co, 1939. Cloth, \$4 50.

In a style that is clear, concise, and eminently readable, the authors present the newer knowledge of nutrition. Emphasizing the "newer," they have completely rewritten the text, the last edition of which appeared in 1929.

The book deals chapter by chapter with the various nutrients. It gives some of the historical background of each, but limits this to only the information essential to understand the latest, accepted research in each case. Where it is necessary to explain the bases for conclusions, laboratory methods are included. However, the greater part of the book deals with the conclusions of the latest investigators of nutrition. The references are carefully selected and most complete.

The text concludes with several excellent chapters on some of the outstanding problems of normal nutrition, such as appetite, diet in relation to teeth, diet in relation to healthful longevity, etc.

Every physician, in whatever branch of medicine he practices, needs information on the newer knowledge of nutrition. There can be no sounder, more dependable, more complete, or easily readable book on the subject than this.

ETHEL PLOTZ BERMAN

**Standard Methods of the Division of Laboratories and Research of the New York State Department of Health.** By Augustus B Wadsworth, M D. Second edition. Octavo of 681 pages, illustrated. Baltimore, Williams & Wilkins Co, 1939. Cloth, \$7 50.

Since the publication of the first edition of *Standard Methods* in 1927 so many advances have been made in the work of public health laboratories that the second edition is timely. This work deals with the procedures used in the Division of Laboratories and Research of the New York State Department of Health. The chief functions of the Division of Laboratories are diagnosis of communicable diseases and the preparation of antitoxins and serums. Therefore this book will be most useful to laboratories doing similar work. However, it will be valuable, also, to workers in all chemical laboratories.

The methods used in the diagnostic laboratory are assembled in one section of 170 pages. The technique is described in sufficient detail for the trained worker. There are numerous cross

references to this section from all parts of the volume. The device of cross reference rather than repetition of technical details has saved space and made possible inclusion of new matter within a single volume.

One of the most important additions to this edition is the new quantitative complement fixation tests for syphilis, tuberculosis, and gonococcal infections. These tests are described in minute detail. The author also gives a new technic for the colloidal gold test on spinal fluid and new methods for the preparation of serums, antitoxins, and vaccines. The book is illustrated with photographs of apparatus used in the laboratories.

E B SMITH

**Operative Orthopedics.** By Willis C Campbell, M D. Quarto of 1154 pages, illustrated. St. Louis, C V Mosby Co, 1939. Cloth, \$12 50.

This work fills a long-felt want. No book has appeared on this same subject since 1925. The author brings up to date all operative procedures devised by many authors up to the present time. Many of the procedures included are reported without editorial comment.

The book starts by giving the normal physiologic limits of the various major joints of the extremity. Then follows an excellent chapter on physiology and pathology of bones and joints, including the chemistry on diseases of bone, bone growth, and repair.

The various operative procedures are made very clear by numerous illustrations. The subject is covered thoroughly. The value of the book is enhanced by a complete bibliography at the end of each chapter.

No orthopedic surgeon or any general surgeon who does bone surgery should be without this book.

J B L'EPISCOPO

**Surgery of the Eye.** By Meyer Wiener, M D, and Bennett Y Alvis, M D. Octavo of 445 pages, illustrated. Philadelphia, W B Saunders Co, 1939. Cloth, \$8 50.

We are offered here a splendid working guide covering the whole field of ophthalmic surgery. As the authors state in their introduction: "No attempt is made to make it a book of reference containing every known method or suggestion."

That single method (or several such) has been selected by the authors which in their judgment will serve the best purpose in a given condition.

The first five brief chapters are replete with practical points of general technique, in preoperative preparation, anesthesia, and postoperative care of the patient. Then follows in an orderly manner a description of operations that, in the hands of the authors, have proved to be the simplest and most successful methods to correct the defect or disease under consideration.

The text is abundantly and splendidly illustrated with drawings by Dr A J Hofsommer, a graduate of Washington University Medical School. The free use of good illustrations obviates the need of minute word description of a given technic, which so often can be more confusing than helpful.

The reviewer has no hesitancy in recommending this work as an excellent operative guide.

CHARLES A HARGITT

our membership in giving it militant, united approval. We have been loud in our denunciation of many flagrant violations of our medical practice act, but, beyond the interest of the radiologists themselves, other physicians have condoned the abuse of the practice of this branch of medicine.

As Taylor<sup>1</sup> in his address as chairman of the Section on Radiology of our State Society so clearly emphasized, those who are engaged in the practice of radiology are practicing medicine. An x-ray examination, in all that the meaning entails, is a diagnostic procedure that requires the skilled training, care, and knowledge that only a licensed physician who has taken considerable postgraduate instruction is capable of possessing. The profession of its own accord, without any regulatory legislation, has, in this specialty as well as in the others, set up a qualifying board to pass upon the fitness of doctors who hold themselves out to the public as competent in the diagnostic and therapeutic use of the roentgen rays. That unlicensed individuals are not only using the rays without supervision but are interpreting films, in some instances with the knowledge and tacit approval of physicians, is a condition known to exist. This must be stopped.

It is our duty to make clear to the public that a roentgenogram is not a photograph or a picture in the ordinary sense of the words. It is an examination that only a skilled radiologist can utilize for the purposes of diagnosis. Now is the time for all of us to do the necessary preliminary educational work and not to wait again until remedial legislation is introduced only to die in committee because of inexcusable disinterest. Too many inroads into the practice of medicine have been made simply because we were insufficiently concerned to do anything at the time.

<sup>1</sup> Taylor, H. K. Chairman's Address Sect. Radiol. Annual Meeting New York State Med. Soc. May 6, 1940.

### Dedication of Osler Memorial to be Held at Blockley

THE old autopsy house where Osler worked at Blockley has been restored as the Osler Memorial Building and will be dedicated on the grounds of the Philadelphia General Hospital, at Curie Avenue, near 34th and Pine streets, Philadelphia, at 2 P M on June 8, 1940.

Original furnishings, including the necropsy table, have been collected. The painting by Dean Cornwell, N. A., of New York entitled "Osler at old Blockley," later to be hung in the building, will be on exhibition during the celebration.

There are facilities in the building for the housing and preservation of relics of old Blockley as well as Osleriana. The Committee would welcome any additions to this collection.

A cordial invitation is extended to those who are interested and especially those who are planning to attend the American Medical Association Convention in New York City, June 10 to 14.

recognized by the new subcommittee of the Council. If the committee, acting on such practical principles, from time to time makes recommendations, they will be worth very careful consideration by the entire membership.

### More Facts

Following closely on the recent poll of physicians with respect to their attitude toward federally financed and controlled schemes for the provision of medical service, the action of the District of Columbia Medical Society on April 3, 1940, is illuminating.

A year ago the society organized its Mutual Health Service, a plan permitting subscribers to pay their physicians' bills in advance. Subscribers could choose from among some six hundred physicians. The plan was not dissimilar to those which are now pending or in operation in the State of New York under the name of medical expense indemnity insurance. Single persons with incomes up to \$2,000 and those joined in wedlock and with incomes up to \$2,500 a year were to have been eligible for the privilege of paying for their illnesses in advance. But—

"The best laid schemes o'mice and men

"Gang aft agley,

"And leave us naught but grief and pain

"For promised joy "

The society issued a questionnaire to 26,095 inhabitants of Washington to ascertain their attitude toward prepaying their griefs and pains. Two thousand two hundred nineteen people responded or 85 plus per cent. "Two hundred sixty-five said they were eligible,\* 940 were eligible but not interested, 536 were not eligible but were interested, 473 were neither eligible nor interested, and 5 were undecided "

In abandoning, temporarily, the Mutual Health Service, the Executive Board of the District of Columbia Medical Society observed

"These findings would seem to refute the recent public statements that there is a great demand for prepaid medical service "

And that, would seem to be that

### Abuse in Practice of Radiology

By this time, it is general knowledge that the radiology bill, in which our Society was vitally interested, has failed of passage in the Legislature. To a considerable degree, we can attribute the lack of support for this piece of legislation to the lassitude on the part of

\* Modern Medicine (Apr ) 1940 page 74

### Dr. James Murray Flynn

Dr James Murray Flynn, of Rochester, was graduated from the University of Buffalo, School of Medicine, in 1914. He interned in 1914 and 1915 at the General Hospital in Rochester after which, in 1915, he became assistant roentgenologist to the hospital, in which capacity he served until 1922. The following year he became attending roentgenologist, a position he continued to hold until 1927.

Besides his duties at the General Hospital, Dr Flynn also was roentgenologist at the Park Avenue Hospital from 1920 to the present date, serving in the same capacity at the Monroe County Infirmary from 1928 to 1931, when he became consulting roentgenologist to the same institution, a position he still holds.

In 1918 he served as roentgenologist to U S Base Hospital No 19 A E F, and upon his return was appointed roentgenologist to St Mary's Hospital, where he has continued to serve in this capacity to the present date.

Dr Flynn became a member of the American Roentgen Ray Society in 1919, of the Rochester Academy of Medicine in 1920, of the Radiological Society of North America in 1922, of the Rochester Pathological Society in 1930, a diplomate of the American Board of Radiology in 1934, a fellow of the American College of Radiology in 1938, a member of the British X-Ray Society in 1938, a fellow of the American College of Physicians in 1939, of the American Radiological Society in 1940.

Dr Flynn was elected a member of the Monroe County Medical Society in 1914, of which he became president in 1922. He became a member of the Executive Committee of the Council of the Medical Society of the State of New York in 1930. As president of the Seventh District Branch of the State Society in 1932, he became also a member of the Board of Censors in the same year. Dr Flynn has held numerous offices in the State Society such as secretary of the Section on Radiology in 1934, and chairman of the same section in 1936. He was vice-speaker of the House of Delegates in 1936, 1937, and 1938, and thereafter served the Society as speaker of the House in 1939 and 1940. He was elected president of the State Society at the meeting of May 7, 1940.



JAMES M. FLYNN M.D.

# AMBULATORY INSULIN TREATMENT OF MENTAL DISORDERS

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New York City

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**R**ECENTLY the authors<sup>1</sup> reported the beneficial effects of intravenous insulin in the treatment of mental diseases. In order to simplify the procedure, the present investigation was undertaken to determine whether repeated mild hypoglycemic shocks, produced by insulin given hypodermically, might be beneficial to patients with functional and organic mental disorders.

Suggestive observations that such therapy might be effective had already been made. In 1923 Cowie, Parsons, and Raphael<sup>2</sup> noted that depressed states in diabetic patients frequently cleared during the insulin treatment of diabetes. Other workers, such as Targowla<sup>3</sup> in 1926, Appel and Farr<sup>4</sup> in 1929, and Kuppens and Strehl<sup>5</sup> in 1933, have called attention to the fact that numerous patients with mental symptoms, associated with either functional or organic factors, have shown symptomatic improvement after insulin was injected hypodermically. In general, reports emphasize the transient character of the improvement and the increase in the physical well-being of the patient.

Only two months ago Bennett and Miller<sup>6</sup> reported that repeated mild hypoglycemic shocks are of considerable value in controlling most of the problems of management of uncooperative mental patients in a large state hospital. They do not consider this therapy as being curative, although many favorable remissions occurred. As far as it has been possible to determine, however, no previous report has been made as to the value of repeated mild hypoglycemic shocks over a prolonged period of time in the treatment of

patients with mental disorders of both the organic and functional types.

## Types of Cases Treated

A group of unselected cases with mental diseases of either functional or organic type have been treated with small doses of insulin hypodermically. These patients, as a group, did not present any unusual problems of management in the hospital. Four patients, however, were acutely disturbed and excited when treatment was initiated. The others were readily manageable. The functional group included 18 patients with either schizophrenia, manic-depressive psychosis, or psychoneurosis. The organic group consisted of 4 patients with (1) definite cerebral lesions associated with hypertensive cardiovascular disease, (2) cerebral arteriosclerosis, (3) an organic syndrome following removal of pineal tumor, and (4) a case of organic brain disease of an undetermined type.

## Technic

In general, patients received one hypodermic injection of insulin daily at 5:00 A.M., and then at 8:00 A.M. they were given the usual hospital breakfast. The initial dose was 5 units. This was daily increased by 5 units until the patients manifested a mild hypoglycemic shock, usually characterized by weakness, excessive perspiration, and some drowsiness. Other symptoms associated with the shock, such as myoclonic movements, sensory disturbances, cardiac arrhythmias, and stuporous states, occurred only occasionally and varied from patient to patient. Usually the hypoglycemic





### Medical Society Had Three Presidents

For the first time in the 134 years of its existence the Medical Society of the State of New York on May 7 had three presidents. They are, left to right, Dr. Samuel J. Kopetzky, Dr. Terry M. Townsend, and Dr. James M. Flynn.

Dr. Flynn will serve the Society as president during the year 1940, while Dr. Kopetzky will officiate as president-elect during the same period. Dr. Townsend has just finished his term of office, and under his able leadership it may be said that the Society has achieved a certain elegance, in the sense that elegance is achieved through a maximum of harmonious integration of a number of interdependent functions. Dr. Townsend has labored unceasingly to knit the many professional activities of the Society into an efficient and an effective operating unit. He has presented the cause for medicine to the public in his various speeches and radio addresses at a time when such a presentation has been necessary to dispel the widespread confusion that seems to exist concerning the economic and scientific relations of the profession to the people.

### Correspondence

May 6 1940

#### *To the Editor*

You are hereby notified for the benefit of the members of your society that the New York City Excise Tax on Gross Receipts is due on June 15, 1940. The tax is imposed for the privilege of carrying on or exercising for gain or profit within the City of New York any trade, business, profession, vocation, or commercial activity during the period commencing July 1, 1939, and ending June 30, 1940, or any part thereof. Where a person subject to tax was engaged as described hereinabove during the whole of the calendar year 1939, he is required to measure the tax by the gross receipts for such calendar year.

In view of the foregoing, returns are to be filed by physicians on Form 40B and the gross receipts from the profession or vocation engaged in should be reported as Item 5 on page 1 of the return. Profits from stock and bond transactions, interest received on bank deposits, notes, bonds, loans, etc., and dividends received on stocks of domestic and foreign corporations need not be reported when the receipts therefrom

constitute transactions of a strictly personal nature. In reporting the gross receipts no deduction may be taken for salaries and office expenses. The tax is to be computed at the rate of one tenth of one per cent.

There is no exemption granted under the current Gross Receipts Tax Law. However, there is no tax imposed where the gross receipts from the profession or vocation engaged in do not exceed \$10,000 per annum. In such event no return need be filed.

Returns must be filed on or before June 15, 1940, with the Bureau of City Collections in the borough in which the taxpayer maintains his office. A remittance for the total amount of tax due, drawn to the order of the City Collector, must accompany the return when filed. Tax blanks will be mailed to all taxpayers who have filed returns under prior laws.

Further information may be obtained from the Emergency Revenue Division, 50 Lafayette Street, Manhattan (Worth 2-4780).

SAMUEL ORR, Special Deputy Comptroller

TABLE 2—EVALUATION OF EFFECTS OF AMBULATORY INSULIN

No	Pa- tient	Age	Sex	Diagnosis	Duration of Illness	Previous Treatment	Number of Ambula- tory Hypo- dermic Insulin Injec- tions	Dura- tion of Ambula- tory Insulin Treat- ment (Weeks)	Total Amount Insulin (Units)	Maxi- mum Dosage (Units)	Clinical Response
1	A. L.	50	F	Psychosis with hyper- tensive cardiovas- cular disease—para- noid type	1 yr 3 mo	None	48	7	1 145	35	Much improved
2	H. S.	55	M	Paranoid psychosis with cerebral ar- teriosclerosis essen- tial hypertension	2 wk.	None	63	14	1 185	40	Much improved
3	A. B.	20	M	Psychosis with new growth (pinealoma) postoperative	6 yr	Operation f o r brain tumor	94	17	1,270	20	Much improved
4	M. L.	44	F	Psychosis with or- ganic brain dis- ease undetermined type	1 yr 6 mo	None	43	6	1 540	40	Transient im- provement dur- ing hypo- glycemia
5	S. G.	20	F	Proprietary Schizophrenia	1 mo	None	74	11	3 104	40	Unimproved
6	R. N.	31	F	Schizophrenia cata- leptic	11 days	None	39	5	1 480	40	Much improved
7	J. H.	21	F	Schizophrenia cata- leptic	5 days	None	11	2	455	75	Much improved
8	V. C.	24	F	Schizophrenia cata- leptic	4 mo	None	25	6	2 610	130	Recovered
9	S. Z.	17	M	Schizophrenia, hebe- phrenic	5 mo	None	137	28	6 655	65	Much improved
10	C. B.	25	F	Schizophrenia hebe- phrenic	3 wk.	None	37	7	850	10	Slightly im- proved
11	B. K.	27	F	Schizophrenia hebe- phrenic	10 yr	Insulin and met- razol	451	70	20,000	50	Much improved
12	L. N.	17	M	Schizophrenia mixed	1 mo	None	21 inter- mittent	8 inter- mittent	835	80	Unimproved
13	A. H.	29	M	Schizophrenia, simple	3 yr	Intra- venous insulin	95	20	2 550	40	Slightly im- proved
14	S. W.	31	F	Schizophrenia cata- leptic	2 wk.	None	102	10	3 705	40	Much improved
15	F. T.	26	F	Schizophrenia hebe- phrenic	8 mo 15 days	None	57	7	2 075	40	Much improved
16	R. L.	39	M	Manic - depressive depressed	0 mo	None	30	6	1 055	55	Slightly im- proved
17	H. O.	28	F	Manic - depressive depressed	3 mo	1 metra- zol con- vulsion	208	34	6 790	45	Slightly im- proved
18	S. B.	30	F	Manic - depressive, mixed agitated	2 mo	None	8	1	440	90	Unimproved
19	F. R.	17	F	Manic - depressive circular	1 yr 1 mo	None	69	11	2 390	40	Much improved
20	I. W.	37	F	Manic - depressive hypomanic	intermittent 14 yr	None	116	17	3 765	40	Much improved
21	S. C.	24	M	Psychoneurosis mixed	9 yr intermittent	None	167	30	7 306	60	Slightly im- proved
22	A. O.	58	F	Psychoneurosis mixed	19 yr intermittent	None	115	23	3 155	50	Much improved

As a rule, it was observed that patients became more sensitive to insulin as the number of treatments increased. At first a patient on 40 units of insulin might have few, if any, symptoms. After a period of several weeks marked hypoglycemic symptoms might appear, so that the insulin dosage was decreased or food was given earlier.

That the blood sugar levels were definitely reduced by the small doses of insulin administered can readily be seen from Table 3. These are illustrative blood sugar values obtained from several

patients about two hours following the injection of insulin.

Several remarkable effects of the hypoglycemic state on organic cases were observed. One patient (Case 4), suspected of early Pick's disease with a clinical syndrome primarily characterized by a generalized rigidity, immobility, mutism and drooling, would repeatedly, in the hypoglycemic state, cease drooling, become quite relaxed, spontaneous in activity, animated, and talkative. At the close of the hypoglycemic state she would relapse to her previous rigid condition. Another

symptoms began to manifest themselves about two hours after the injection and gradually increased in severity. Patients were permitted to remain in a state of hypoglycemia for from fifteen to forty-five minutes, depending upon the intensity of the symptoms. As a general rule 40 units of insulin daily in one dose was sufficient to produce the desired effect. Only on rare occasions was it necessary to use more than 40 units. The hypoglycemic state was usually terminated with breakfast, given about three to four hours after the injection of insulin. During hypoglycemia the patients were up and about, mingling with the others and attending to their routine ward duties. The mild hypoglycemic symptoms did not prevent the patients from feeding themselves at breakfast without any assistance.

On rare occasions it was necessary to increase the insulin dosage above 40 units in order to produce hypoglycemic symptoms. But after a few weeks the patient's sensitivity increased so that the insulin dosage could be decreased. Those patients included in this report (Cases 7 and 8, Table 2), to whom larger doses of insulin were given, had been on the insulin coma wards where they were expected to be treated by the Sakel coma technic. They improved, however, without coma and might just as well have been treated with the ambulatory technic and a smaller insulin dose. On infrequent occasions a patient developed severe hypoglycemic reactions that had to be terminated either by a glucose solution by mouth, by glucose gavage, or glucose intravenously. If desired, the severity of the hypoglycemic symptoms could be controlled by increasing or decreasing the time interval before which food was given to the patient.

Patients were treated daily for an indefinite period of time until the manifestations of the mental disease had subsided. In some cases the improvement occurred in a relatively short period of time. In others, the remission rate was slower, and the treatments had to be extended over a prolonged period in order to maintain the improvement.

## Effects of the Ambulatory Insulin

Twenty-two patients, 7 males and 15 females, were treated over a period ranging from one week to eighteen months. The clinical diagnoses of these cases are given in Table 1. Some of these patients had received previous treatment. The significant data pertaining to the individual cases are recorded in Table 2.

TABLE 1—DISTRIBUTION OF CASES ACCORDING TO DIAGNOSIS

Diagnosis	Number of Cases
Schizophrenia	11
Manic-depressive psychosis	5
Psychoneurosis	2
Psychosis with organic brain disease	4
Total	22

The usual symptoms associated with hypoglycemia were observed during the course of ambulatory insulin therapy. Excessive perspiration, vasomotor alterations and tachycardia, giddiness, weakness, and drowsiness were noted.

An increase in emotional instability was also observed. Weeping in many instances was marked. Anxiety as a symptom appeared to diminish. In general, it was evident that the emotional responsiveness of the patients was enhanced and that they were frequently made more amenable to psychotherapy and nursing care.

Transitory alterations in the mental status of the patients were outstanding during the daily treatment period and in some instances continued for a few hours thereafter. Agitated and excited patients were quieted, states of confusion were cleared, and dullness and apathy gave way to increased alertness. In many cases such beneficial changes gradually persisted over longer periods of time following the treatment period until definite improvement in clinical behavior was maintained.

It is noteworthy that even the unimproved patients of all diagnostic groups were influenced sufficiently by the insulin treatment so that nursing and feeding problems were simplified.

Generally, all patients gained weight with an accompanying increase in appetite.

nute period of time to maintain these patients on some level of social adjustment. This is apparent in Case 11, where therapy extended over a period of seventy weeks and is still being continued. An important result of this investigation has been to emphasize the value of this treatment over a prolonged period of time, encompassing many months, and possibly in the severe, deteriorating forms of dementia praecox for the remainder of the patient's life.

The fact that patients with organic psychoses were definitely improved appears to be an observation of special significance. Probably it indicates that insulin, either directly or indirectly, has a beneficial effect not only on so-called functional mental disorders but also upon the mental disturbances associated with pathologic lesions in the cerebrum. Furthermore, the fact that one patient (Case 4) showed dramatic but transient improvements of her symptoms during the hypoglycemic period suggests that this form of therapy warrants further investigation of its effects upon disorders of the central nervous system.

### Summary and Conclusions

A group of unselected cases with mental diseases of both the organic and functional type have been treated with small doses of insulin, hypodermically. The functional group included 18 patients with either schizophrenia, manic-depressive psychosis, or psychoneurosis. The organic group consisted of 4 patients with definite cerebral lesions associated with hypertensive cardiovascular disease, cerebral arteriosclerosis, an organic syndrome following removal of pineal tumor, and a case of organic brain disease of an undetermined type.

The treatment consisted essentially of daily hypodermic injections of small doses of insulin three to four hours before breakfast. Generally not more than 40 units in a single dose was necessary to produce the desired effect.

These studies indicate that mild hypoglycemic shocks are of considerable value in the treatment of mental disorders. In

81 per cent of the patients so treated there was definite improvement. The beneficial effects are slowly cumulative. It was also observed that in some cases of dementia praecox this therapy is necessary over an indefinite period of time in order to maintain such patients on some level of social adjustment. Special significance is attached to the fact that patients with organic mental disorders manifested unusual improvement. This form of therapy warrants further investigation as to its effects upon disorders of the central nervous system.

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### Discussion

Dr Karl M Bowman, *New York City*—This is a paper that deals with a modified type of insulin treatment not only for cases of schizophrenia but also for manic-depressive psychoses and organic brain disease. The authors feel that by giving small doses of insulin several hours before breakfast and producing mild hypoglycemic shock they are able to produce improvement in a very high percentage of cases. It might be pointed out that when insulin was first introduced, attempts were made to use it in psychiatry. There were several reports of definite benefit to depressed patients who were not eating well and who were undernourished. Insulin was thought of purely as an aid in the nutrition of the individual, and it was felt that any mental improvement arose on that basis.

It is also of interest that Sakel first used insulin for the treatment of morphine addicts. He claimed that insulin had a quieting effect on these patients and thought that it was due to alterations in the sympathetic nervous system produced by the insulin. From that, Sakel started giving insulin to excited and disturbed psychotic patients. Occasional cases went into hypoglycemic shock. Sakel and a number of other writers noted that these patients seemed to be improved. The other writers, however, did not pursue the matter further while Sakel did and developed his special technic of insulin treatment in schizophrenia. As a result of the

TABLE 3 — ILLUSTRATIVE BLOOD SUGAR VALUES TAKEN TWO HOURS AFTER INSULIN INJECTION

Case Number	Insulin Units	Blood Sugar (Mg per 100 cc.) (Folin Wu Technique)
4	40	18
5	40	27
11	45	17
19	40	36

patient (Case 2), with hypertensive cardiovascular disease, cerebral thrombosis, and right hemiparesis, would be agitated and assaultive and would mumble incoherently in a foreign tongue. During the hypoglycemic state, however, he became cooperative, less voluble, and more alert, and would converse readily in English. After an unusually hearty meal he would relapse to his previous psychotic state. Gradually, however, he showed much improvement.

Some untoward insulin effects were observed. One patient (Case 12) appeared to become extremely agitated during the state of hypoglycemia and was greatly disturbed by "red spots" before his eyes. He seemed to improve when placed on a high carbohydrate intake.

Another patient (Case 18) became extremely agitated during the hypoglycemic period. Insulin was soon discontinued, and this patient subsequently manifested a dramatic recovery on metrazol therapy.

In all, 22 patients with a variety of mental disorders were treated with ambulatory insulin therapy. One patient recovered, 12 were much improved, 5 were slightly improved, and 4 remained unimproved by the insulin treatment itself. Those considered much improved were able, despite residual symptoms, to adjust themselves socially at a level paralleling their premorbid behavior. Those in the category of slightly improved showed a definitely increased ability to adjust themselves to the hospital routine but did not reach their premorbid behavior level because of residual symptoms. No coma, allergic manifestations, convulsions, or observable injuries occurred during treatment.

### Comment

Our studies were primarily directed to determine whether mild hypoglycemic shock was of benefit in the treatment of

patients with mental disease. It was found that the ambulatory insulin treatment here outlined produced hypoglycemic symptoms fairly regularly and that the repeated daily shocks were of increasing benefit. In 81 per cent of patients treated there was a definite improvement as defined above.

This method of treatment had numerous advantages over the usual Sakel hypoglycemic coma technic. It did not require any special ward facilities for therapy. The ambulatory shock was easily terminated by the usual breakfast. No detectable injuries were observed. A minimum of nursing supervision was necessary.

There appeared to be a steadily increasing sensitivity to insulin during treatment. Generally it was found that after continued therapy the patients would show more severe hypoglycemic symptoms or that their reactions would occur much earlier following the injection. On the other hand, the rate of improvement with this type of therapy appeared to be slower than that observed with the Sakel technic or with the intravenous method. The beneficial effects of the mild hypoglycemic shocks seemed to be slowly cumulative. The first effects occurred in the general physical condition of the patients. In the patients as a group, appetite and sleep were improved. Later, the patients appeared to show more favorable affective changes and to be in much better contact with the environment. Alterations in the abnormal mental content were last to be effected. In those patients with a more chronic course, the insulin seemed to bring the patients into better rapport with the physician. Then active psychotherapy could be applied favorably to influence the morbid mental trend.

It is felt, therefore, that this therapy must be extended over a period of many months. Previous investigators have discontinued treatment, after favorable effects were observed, in one to two months. Our observations indicate, however, that in some cases of dementia praecox treatment is necessary over an indefi-

# ACUTE PUTRID ABSCESS OF THE LUNG— A SURGICAL DISEASE

HAROLD NEUHOF, M.D., and ARTHUR S. W. TOUROFF, M.D., New York City

(From Mt. Sinai Hospital)

**A** SURGICAL disease may be broadly defined as one in which operative treatment yields a higher proportion of satisfactory results than other forms of therapy. The term "surgical disease" does *not* mean that surgery is to be used immediately or that it is the *only* form of treatment to be employed. For example, in acute appendicitis—a classic surgical disease—there are some situations in which immediate operation is not indicated and others in which subsidence occurs without operation. Such considerations, however, do not negate the validity of the concept of acute appendicitis as a surgical disease.

Almost all contributions of surgeons and internists to the subject of acute pulmonary abscess advocate conservative therapy, operative treatment usually being reserved for the subacute and chronic stages of the disease. Two arguments that generally have been advanced against surgery in the acute stage are the frequency of spontaneous cure (or cure by conservative methods) and the danger of inducing a spread of gangrene by early incision of infiltrated "pneumonic" lung. Thus, at the present time, acute putrid abscess of the lung is not generally regarded as a surgical disease.

The purpose of the present contribution is to set forth the reasons that have led us to the opposite point of view, namely, that acute putrid abscess of the lung is in fact a surgical disease. It is our contention that operative treatment in the acute phase is a logical, safe, and effective form of therapy if (1) the course of the disease is severe, (2) the patient's life appears to be in jeopardy, or (3) subsidence of infection does not occur within a reasonable period of time.

By an "acute abscess" we mean one in which the symptoms are of less than six weeks' duration. This rather arbitrary time limit was set because, toward the end of the first six weeks of illness, we noted the development of certain complicating pathologic features that often rendered the disease more serious and the results of treatment less satisfactory.

As was pointed out in previous communications,<sup>1,2,3,4,5</sup> an uncomplicated acute putrid abscess of the lung, such as usually is encountered before the end of the six-week period, is a solitary, monolocular, soft-walled lesion situated superficially within a pulmonary lobe. The shell of lung over the abscess is thin, compressed, and essentially avascular. Localized adhesions are always present. They invariably agglutinate the surface of the lung (overlying the abscess) to adjacent structures, usually the thoracic parietes. Occasionally, however, because of the situation of the abscess, adhesions unite the involved area of the lung to an adjacent lobe, to the mediastinum, or to the diaphragm. In most instances, the surrounding pneumonitis is of limited extent. The bronchial tree, except in the immediate area, is little affected. By way of contrast, a chronic abscess is stiff-walled, usually multilocular, and often associated with extensive surrounding pulmonary infiltration, induration, and fibrosis. Multiple lesions in the same lobe, other lobes, and in the opposite lung are not infrequently present. Secondary bronchiectasis is common.

The foregoing features, observed at operation as well as at autopsy, explain the difference in the clinical manifestations, roentgen features, and general prognosis of acute as compared with chronic

attention that Sakel's method has received, these other observations have been forgotten. One is interested, therefore, in seeing these early methods revived and certain alterations made that will form a new method of treatment. I am convinced that insulin does have a quieting effect on many excited and disturbed patients, although I do not believe that the manner in which it works is understood. As to whether there is any one best technic for using it is questionable. The authors, themselves, point out that certain cases were made worse by the injections. Sakel, although holding to a very rigid technic when he first came to this country nearly four years ago, has constantly modified his procedure and has come to emphasize more and more the necessity of individual variations in the technic of the treatment.

The important contribution of the paper just read appears to be the development of a rather specific technic that enormously simplifies the problem of insulin treatment. Everyone who has worked with it knows that one physician can manage only about twelve cases at a time using Sakel's technic, and the full services of two nurses are required during a part of this time. Under this new method it would seem possible to treat rather large numbers of cases with very little additional work on the part of doctors and nurses and with relatively little danger. The one drawback appears to be the longer period of time required for the treatment. The use of the mild hypoglycemic shocks in all types of psychoses raises the very fundamental problem as to the

matter of the physiologic disorder that produces mental symptoms. It is possible that the nutrition of the brain is definitely affected in a favorable manner by the use of insulin, although it appears that the immediate temporary effect is to interfere with normal metabolism of the brain. The work of the authors, therefore, suggests that there is a specific beneficial effect of insulin, and they have worked out a new modification of technic for its administration which has a definite place in our armamentarium. The number of cases of the various types of psychoses is too small for statistical conclusions but is sufficiently optimistic as to render further studies of this sort desirable. Their work is, I think, a definite contribution to this field.

**Dr Phillip Polatin, New York City**—We wish to thank Dr Bowman for so clearly indicating in his discussion the essential value of this type of therapy. He has developed, from the standpoint of his comprehensive experience, several of the ideas that occurred to us as a result of our work. As Dr Bowman stated, the mechanism of insulin action is not precisely understood at the present time. The treatment we have used can be highly individualized.

Two of the advantages of this technic are its simplicity and the fact that it can be applied to a large number of patients without changing the hospital routine. Nurses become quite readily trained to recognize the symptoms desired.

We hope in the near future to utilize this mode of therapy on a larger scale.

#### REUNIONS—A M A CONVENTION

The Committee on University Dinners wishes to announce that the following organizations have made definite arrangements for reunions during the coming session of the American Medical Association at the Waldorf-Astoria in New York.

Johns Hopkins	Dinner	June 12
Nu Sigma Nu	Lunch	June 12
N Y Post-Graduate	Lunch	June 12
Harvard Medical	Dinner	June 12
University of Minnesota	Dinner	June 12
College of Physicians & Surgeons, Columbia Univ	Dinner	June 12
	Lunch	June 13
Northwestern University	Dinner	June 12

Phi Beta Pi and Alpha Upsilon Omega	Joint lunch	June 12
A. K. K.	Lunch	June 12
Phi Chi	Lunch	June 13
Kings County	Dinner	June 15

Members of these organizations are asked to register at the Committee's booth on the third floor of Grand Central Palace as soon as possible after arriving in New York, whether or not they attend the reunion.

Other alumni groups and medical fraternities should communicate with the chairman of this committee, Dr Norman E. Titus, 730 Fifth Avenue, New York. Dr Titus will cooperate in arranging the details of reunions.

The practice of medicine, that is helping others, does something to the individual himself. A man can't work a lifetime helping people and not

be affected thereby in a personal way. He should become a better man and a better doctor.—William D. Johnson, M.D.

by surgery an infection that, after a period of observation, either showed no tendency to subside spontaneously or appeared to be progressing unsatisfactorily. We also bore in mind the not infrequent occurrence of complications during the acute phase, such as hemorrhage, sepsis, and spillover gangrenous bronchopneumonia.

Before considering operative treatment in relatively mild cases and thus placing all cases of acute putrid pulmonary abscess at least *potentially* in the surgical category, it was essential to determine whether it was safer to operate or not to operate when doubt existed as to the likelihood of spontaneous recovery. For if the morbidity and mortality of operation were higher than the morbidity and mortality of nonoperative therapy, surgical treatment would have been entirely illogical. However, if, as in acute uncomplicated appendicitis, operation were safe and the results of operation satisfactory, it would appear wiser to operate, perhaps at times unnecessarily, than to expose the patient to the immediate or ultimate dangers of the disease. Keeping an open mind in regard to this problem but at the same time encouraged by the very satisfactory results that had been achieved in operating upon the severe forms of the disease described above, we broadened the indications for operation. As excellent results and low mortality continued, the operative indications were broadened still further. At the present time we operate upon the following types of cases of acute putrid abscess: (1) those in which the lesion is large (2 inches or more in diameter) regardless of an apparently satisfactory clinical course, (2) those in which x-ray examination reveals extensive pleural reaction suggesting impending perforation of the pulmonary lesion into the pleura, (3) those in which there is clinical and roentgenographic evidence of interference with adequate spontaneous drainage via the bronchial tree, and (4) those in which cure, by the strict criteria previously described, has not taken place or is not well under way by the end of the six-week period.

It is to be emphasized that operation

ordinarily was not performed in the acute cases that were progressing satisfactorily. On the other hand, it may be assumed that a certain number of operative cases might have recovered spontaneously if we had been willing to temporize in doubtful cases.

The results of the operative technique that we advocate have already been described.<sup>1,2,3,4</sup> To date we have operated upon 104 cases of acute putrid abscess of the lung. There were 4 deaths, 3 already reported in detail. Cure, by the strict criteria that we have indicated, was achieved in most of the cases, the longest follow-up being fifteen years\*. Since these 104 cases comprise the only large reported series of acute pulmonary abscess treated by operation, there has been no opportunity to compare the results with those obtained by others. However, by themselves, they offer convincing evidence not only of the feasibility of operation in the acute phase of pulmonary abscess, but also of its safety and efficacy.

We realize that the concept of acute pulmonary abscess as a surgical disease differs radically from that which has been held up to the present, and therefore this new concept may not be generally acceptable. Nevertheless, it should appeal to those who have had a large experience with pulmonary abscess and as a result are aware of the dangers and uncertainties of the acute phase and the problems presented by cases that are chronic or are progressing toward chronicity. It is our belief that, if the principles that we have outlined are observed, the results in acute abscess will prove as satisfactory in the experience of others as in our own and that the menace of subacute and chronic abscess will disappear.

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\* A number of recently operated cases are not cured as yet, but are progressing toward cure.



pulmonary abscess They also explain why nonoperative methods usually fail to cure chronic abscess Finally, they indicate why the surgical treatment of chronic abscess, as reported by all observers, often involves extensive or multiple drainage operations or extirpations, with attendant morbidity, mortality, and high incidence of unsatisfactory results Thus, the failure of surgical and nonsurgical therapy to produce brilliant results in chronic pulmonary abscess appears to be ascribable primarily to the nature and extent of the pathologic changes in the lung rather than to the actual method of treatment employed Accordingly, it is logical to believe that the best results, under *any* type of therapy, will be obtained when treatment is applied before the lesion has become chronic It therefore follows that any form of treatment that proves ineffectual in the acute phase should be discontinued before the subacute phase is reached

Many papers have been written concerning the results of the conservative treatment of pulmonary abscess Although all observers agree that cures under conservative therapy are much more common in acute than in chronic pulmonary abscess, considerable disagreement exists in regard to the actual incidence of such cures in the acute phase Concerning the latter, the reported incidence of cures ranges from 30 to as high as 90 per cent This discrepancy perhaps is based primarily upon the interpretation of the term "cure" Our criteria of cure are strict and consist of both freedom from symptoms and disappearance of cavity and pulmonary infiltration in the roentgenogram Bronchoscopy, if performed, must be negative The significance of the disappearance of pulmonary infiltration is best illustrated by cases of confirmed chronic pulmonary abscess that came under observation with a history of having previously been "cured" in the acute phase In all such cases, the telltale evidence of pulmonary infiltration was to be seen in the roentgen films whenever such films, taken at the time of "cure," were available for inspection

The frequent occurrence of subacute and chronic abscess offers incontrovertible evidence that, in the acute stage, cures following conservative treatment are not as common as has often been reported If the subacute and chronic cases that come under observation represent only a small proportion of the total number of cases of pulmonary abscess, the vast preponderance of cases having subsided previously in the acute phase under conservative therapy, then abscess of the lung must be an infinitely more common disease than hitherto has been suspected

The frequency of subacute and chronic pulmonary abscess and the universally conceded high incidence of unsatisfactory results of treatment in these later stages of the disease led us to conclude that it was essential to make every effort to cure patients during the acute phase Furthermore, it appeared proper, if conservative methods failed during the acute phase, to consider direct surgical evacuation of the lesion before it tended to become chronic In any event, there was one type of case in which the application of surgical drainage seemed particularly logical, namely, the hyperacute or fulminating type Here, symptoms are severe, pulmonary excavation is rapid and extensive, and the clinical course usually is rapidly downhill Our early experience with the operative treatment of acute pulmonary abscess was confined to such cases as well as to those in which the lesion was complicated by spontaneous perforation into the pleura In both groups, operation, which appeared imperative as a life-saving measure, not only accomplished its immediate purpose but also was followed by satisfactory results

These unexpected results in particularly severe cases led us to consider the advisability of operating upon patients suffering from less severe forms of acute putrid pulmonary abscess, for it was logical to assume that at least equally satisfactory results could be anticipated in the latter The general condition of many of these patients was fair or good Thus, we were faced with the problem of whether or not to attempt to terminate



FIG 1 Migrating abdominal tube for relief of neck contracture before starting wound study

tions of skin with a skin punch (Fig 9). This will give a series of oval wounds of different duration and all of the same original size. The diameter of the punch selected will depend upon the number of experimental wounds desired and the objective of the study to be made. In abdominal skin, a punch 8 mm in diameter makes a wound that requires about three weeks for complete healing under a dressing of boric acid ointment changed daily. About six such sections may be made in the area ordinarily available. If control wounds are desired, they are made at the opposite end of the tube with the same punch and same time intervals. These oval wounds heal by granulation and epithelization rather than by "first intention" and permit observation of the healing process over a longer period. Most of the incised wounds in the abdominal skin of the young individuals in this series



FIG 2 Three pairs of sutured incised wounds at twenty-four, forty-eight, and seventy-two hours. Ready to detach tube and excise marked out area containing the wounds



FIG 3 Incised wound in skin of anterior thigh at twelve hours ( $\times 165$ )

were completely covered with epithelium in ninety-six hours.

#### Healing of Free Skin Grafts

The healing of free skin grafts may be studied by removing circular sections of skin, as described above, and grafting the defects with skin of the desired thickness. The time available should be adequate for studying the circulation in such grafts but will not suffice for the observation of nerve

# THE USE OF TUBED PEDICLE FLAPS FOR THE STUDY OF WOUND HEALING IN HUMAN SKIN\*

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**T**HE purpose of this paper is to present a method for the study of the healing of wounds and free grafts in human skin. A review of the literature reveals the fact that most of the observations on wound healing have been based upon animal experiments or clinical studies. Apparently no practical means of obtaining microscopic sections of wounds in human skin at stated intervals has been reported. The difficulties involved in removing sections of human skin wounds at intervals of twelve to twenty-four hours are obvious. The method to be described depends upon the fact that a section of skin adjacent to the attachment of a tubed pedicle flap is sometimes discarded when the defect left by cutting the pedicle is closed. A preliminary report on the microscopic study of wound healing in human skin is included.

When a tubed pedicle flap (Fig. 1) is constructed, an interval of two to three weeks is usually allowed for healing of the tube and development of its blood supply before shifting the first end. A similar interval is necessary before the second end can be detached. When either end of such a tube is cut through and implanted elsewhere, a defect is left where the tube was removed. In order to obtain a smooth closure of these defects it is usually necessary to excise the excess skin around them. These portions of excess skin, usually triangular in shape and measuring about 2 inches on the long sides, are ordinarily discarded. It is these triangular areas of skin which may be utilized for this study (Fig. 2).

The experimental wounds may be made,

under local anesthesia, any time after construction of the tube. If desired, the first wounds of the series may be made at the time the tube is formed. Similar wounds are made at regular intervals, but none are removed until the tube is detached at the end of the three-week period. At that time the triangular area of skin containing all the experimental wounds is excised with some subcutaneous fat. Each wound is immediately cut out as a separate block, using a razor blade held in a clamp, and dropped into a labeled bottle of fixing fluid. The first wound of the series is then nearly three weeks old and the last twelve or twenty-four hours old.

## Healing of Incised Wounds

Incised wounds studied by this method may be either sutured or unsutured. The wound gaps will be narrower and more uniform in width if the wounds are sutured. The efficiency of different suture materials and the reaction of the tissues to them may be studied. The effect of various methods of inserting sutures may also be observed. The importance of accurate approximation of the epithelial edges and avoidance of inversion may be seen. The effect of dead space, infection, and necrotic tissue on wound healing, all of which have been observed clinically and in animal experiments, can be studied here in human skin wounds, under controlled conditions. Since both skin and subcutaneous tissue are included in the blocks, various phases of fibrous as well as epithelial healing may be observed.

## Healing of Circular Wounds

Instead of making incisions, circular wounds may be made by removing sec-

\* Aided by a grant from the Hendricks Fund for Medical Research.



FIG 1 Migrating abdominal tube for relief of neck contracture before starting wound study

tions of skin with a skin punch (Fig 9). This will give a series of oval wounds of different duration and all of the same original size. The diameter of the punch selected will depend upon the number of experimental wounds desired and the objective of the study to be made. In abdominal skin, a punch 8 mm in diameter makes a wound that requires about three weeks for complete healing under a dressing of boric acid ointment changed daily. About six such sections may be made in the area ordinarily available. If control wounds are desired, they are made at the opposite end of the tube with the same punch and same time intervals. These oval wounds heal by granulation and epithelization rather than by "first intention" and permit observation of the healing process over a longer period. Most of the incised wounds in the abdominal skin of the young individuals in this series

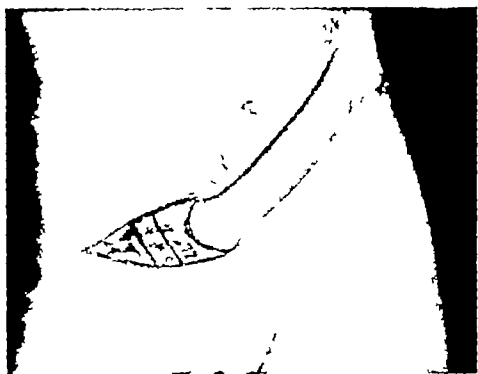


FIG 2 Three pairs of sutured incised wounds at twenty-four, forty-eight, and seventy-two hours. Ready to detach tube and excise marked-out area containing the wounds.

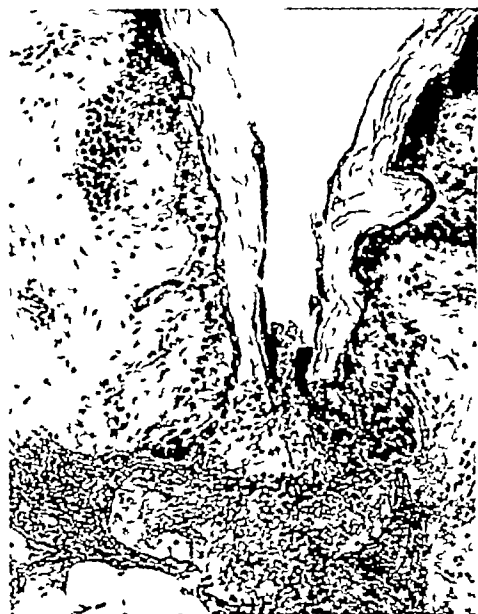


FIG 3 Incised wound in skin of anterior thigh at twelve hours ( $\times 165$ )

were completely covered with epithelium in ninety-six hours.

#### Healing of Free Skin Grafts

The healing of free skin grafts may be studied by removing circular sections of skin, as described above, and grafting the defects with skin of the desired thickness. The time available should be adequate for studying the circulation in such grafts but will not suffice for the observation of nerve

regeneration The grafts may be placed immediately on the fat base, or time may be allowed for the formation of granulations before grafting The effect of various methods of fixing the grafts on the defects may be seen and different types of dressings, pressure, etc., may be tried

### Stimulation of Wound Healing

In a search of the literature for the last twenty years the author counted 166 different agents suggested for the stimulation of wound healing The evidence offered in these instances is chiefly in the form of animal experiments or measurements of healing wounds in humans The disadvantages of such observations without proper controls in the human cases are apparent It is therefore suggested that the method described here be applied to the evaluation of such agents, using, for the purpose, wounds made with the skin punch The control wounds are made at the first end of the tube These wounds are excised and fixed before the treated wounds at the other end of the tube are made This eliminates the possibility that the control wounds might be affected by the agents being investigated

### Observations on Epithelial Healing in Incised Wounds

A study of eight series of sections of incised wounds in human skin obtained by this method seems to confirm the observations of Arey,<sup>2</sup> Hartwell,<sup>3</sup> and others—that movement of pre-existing cells is an essential factor in epithelization Under the conditions of these experiments the latent period of five or six days, described by Carrel,<sup>1</sup> seems to be absent The twelve-hour sections (Fig 3) show slight but definite activity In most of the sections of unsutured wounds studied, the defect is covered in ninety-six hours Mitoses are infrequent both in the adjacent intact epithelium and in the epithelial tongues stretching out to cover the defects In general, the larger the defect the slower the rate of epithelial advance The presence of necrotic cells also delays healing Good approximation and minimal tissue damage are essential to rapid and con-

tinuous movement of cells over the defect Ameboid movement of pre-existing epithelial cells seems to be the chief factor in bridging the gap in the epithelium This is supported by the relative scarcity of mitotic figures, the direction of the long axes of the cells in the epithelial tongues (parallel to the surface), and the tendency of the cytoplasm of the foremost cells to stretch out in advance of the nucleus

The environment of the advancing cells also appears to determine the rate of progress A moist medium and a suitable base seem to be essential Where the epithelial tongue is covered with a dry crust, the more superficial cells show evidence of cornification and necrosis, and advance is inhibited (Fig 6B) Progress over fat globules is slower than over vascular connective tissue or new granulations Optimum advance of epithelium is seen in those sections where there is no infection, and a narrow epithelial gap is filled with fibrillar fibrin overlying a base of rather vascular connective tissue or new granulations (Fig 8)

Contraction does not appear to play an important part in the closure of these incised wounds Carrel<sup>1</sup> believes contraction is the most important factor in reducing the area of an open wound greater than 10 mm Burrows<sup>4</sup> found that loose skin closes by contraction to the limit of elasticity or until the skin is fixed by connective tissue overgrowth in the gap In more firmly anchored skin he found migration of epithelial cells prompt and early shrinkage meager

### The Mechanism of Epithelial Healing

Until recently we were taught that a gap in the epithelium was closed by formation of new cells originating by mitosis, chiefly from the basal cell layer It now seems to be fairly well established that mitosis plays a minor part in the healing of epithelium, that it occurs secondarily to cellular movement, and late rather than early in the healing process MacCallum<sup>5</sup> says "Apparently many of them move out to spread over the uncovered area before any division occurs, because the karyokinetic figures are found a short



FIG 4 Incised wound in abdominal skin at twenty-four hours ( $\times 105$ )

distance back of the edge, and especially in the lower layer of cells. These less modified cells seem to take a greater part in the new formation than those which have progressed toward keratinization and have therefore lost, to some extent or completely, their power of division. It is generally stated that direct or amitotic division plays a great part in this new formation of epithelium, but this statement receives very little support from the direct observation of growing epithelium *in vitro*."

That the epithelial cell is potentially a motile cell and may under certain conditions show pseudopodums is evident from studies *in vitro*.<sup>6</sup> The form of cells in cultures depends on the type of base. In fluid mediums they tend to be spherical. On a fiber they are stretched out and closely applied to the fiber, while on a flat surface they are round with round nuclei. Burrows,<sup>4</sup> discussing the relation of tissue culture to surgical pathology, describes the "sliding of wound edges toward each other by ameboid movement of the cells."

Wolfer<sup>7</sup> mentions the differentiation of epithelial cells at the margins of a wound and the movement of these cells to cover

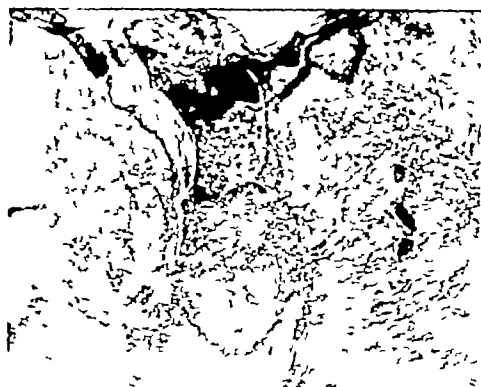


FIG 5 Incised wound in abdominal skin at thirty-six hours ( $\times 105$ )



FIG 6A Wound at forty-eight hours. Long epithelial tongue at left beneath dry crust ( $\times 65$ )

the defect. He states that there is little or no increase in mitosis during this stage—"Due to some stimulation, the modified epithelial cells at the margins begin to move out in a centripetal manner, cells often advancing in pairs, in some instances with pseudopodal prolongations."

It should be remembered that there are several factors that may influence the number of mitotic figures found in epithelium. Thuringer<sup>8</sup> observed that the



FIG 6B Higher magnification of epithelial tongue seen in Fig 6A. Necrotic epithelial cells beneath dry crust ( $\times 180$ )



FIG 8 Sutured wound at seventy-two hours. Gap completely closed ( $\times 100$ )



FIG 7 Epithelial gap nearly closed at seventy-two hours in unsutured wound ( $\times 65$ )

younger the individual and the more rapid the growth the more mitotic figures one



FIG 9 Left edge of an 8 mm circular wound at five days. Type of wound used for study of skin grafts and effects of wound healing agents ( $\times 100$ )

may expect to find. He also found that the ratio of resting cells to mitosis in-

creases with delay in fixation. It is known that mitoses are more numerous in areas of skin subject to exposure and that mitoses tend to occur in "waves." One might find ten to fourteen mitotic figures in one high-power field and none in the next. With these points in mind, young subjects were selected for this experiment. Because of the fixation factor and its relation to mitosis, only a few seconds were allowed to intervene between removing the blocks and placing them in the fixing fluid. Serial sections were studied in the search for mitoses.

The first to suggest that ameboid movement plays a part in epithelization were Klebs,<sup>9</sup> in 1875, and Peters,<sup>10</sup> 1885. Loeb,<sup>11</sup> 1898 and 1920, also holds this view. Werner,<sup>12</sup> 1902, observed the movement of epithelium over mammalian wound surfaces and noted that mitoses were not increased during the early stages and did not occur in the cells of the border zone. More recent evidence in favor of this concept of wound healing has been offered by Hartwell,<sup>2</sup> in 1929, Arey,<sup>2</sup> 1932, and Herrick,<sup>13</sup> in 1932. Arey,<sup>14</sup> 1936, says "Mitosis is not a feature of the early stages and in small wounds may not show any increase until epithelization is complete. In such instances the mitotic region may be quite outside the repair area, and this activity can then be interpreted as compensatory and, for the purpose of restoring cells, lost to the wound by migration. If the lesion be small enough and the supply of cells large enough, the mitotic phase may never become detectable as such. In wounds so large that the adjoining epithelium cannot supply sufficient cells within a comparatively short time, cellular proliferation then enters before epithelization is complete, and cell movement and cell proliferation go on simultaneously."

Hartwell<sup>2</sup> studied 89 surgical wounds in all stages of healing. He found mitosis occurring secondarily to cellular movement and late in the process. He feels that the causes of delayed epithelial healing are the unsuitable wound surface and rapid cornification of the membrane cells due to unfavorable environment.

## Summary

A method of obtaining material for the microscopic study of the healing process in human skin is presented. For this purpose a triangular area of skin adjacent to the attachment of a tubed pedicle flap is utilized. This portion of skin is often excised and discarded when the tube is detached and the defect closed. Either incised or circular wounds are made according to the type of study intended.

The healing of free skin grafts may be observed and agents suggested for the stimulation of wound healing evaluated. One end of the tube may be used for control wounds.

Eight series of wounds have been obtained by this method to date, with excellent cooperation from patients and very little added discomfort. There have been no infections and no other complications. It is, of course, important to avoid infection and protect the operative result. For this reason it is suggested that only those experienced in plastic surgery use this method of research. Releases should be obtained from responsible parties before proceeding.

Study of the incised wounds in this small series seems to confirm previous observations that movement of pre-existing cells is the most important single factor in epithelization, that mitosis is negligible in the smaller wounds, and that good approximation of the wound, elimination of dead space, freedom from infection and necrotic tissue, a moist environment, and a base of vascular connective tissue or new granulations are all essential to rapid healing of epithelium.

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## Discussion

Dr Gustave Aufrecht, *New York City*—Experimental studies of wound healing in animals and *in vitro* are valuable from a general biologic point of view, however, the histologic difference between the skin of laboratory animals and that of the human skin make experiments on human skin preferable. Though such experiments have been performed in the past, Dr Sutton's suggestion of a method of studying wound healing on the human skin, under systematically controlled conditions, opens up new vistas for experimentation.

The adjacent skin at the pedicle of a tube flap provides ideal and often available material for experimentation without undue harm and discomfort to the patient. Further investigations are indeed necessary in the important subject of wound healing, which was so well characterized by Sir Astley Cooper as "the foundation of surgical science."

Although since the advent of the microscope endless literature has been published on the subject, there is still much controversy on the mechanism of wound healing. As Harvey, for instance, states "The question as to whether the proliferation of fibroblasts takes place from the pre-existing fibrous tissue or from a 'fill' of undifferentiated monocytes, or both, is still undecided."

For centuries surgeons have variously interpreted the changes in wounds as due either entirely to the healing power of nature or partly to their own ingenious interference. Characteristic of the latter attitude is Dr Sutton's collection from the literature of 166 stimulating agents for wound healing.

Surgically united wound surfaces first adhere by a thin fibrin layer. Not less than four days are necessary for fibrous healing to begin and about twelve days for it to be completed. This time element is important in connection with the surgical aspect, which I shall discuss later. Epithelial healing, which occurs through amoeboid migration of cells and not through mitosis, is complete about the fifth day. The rapidity of this process is in harmony with Dr Sutton's observations that epithelial activity is already in progress after twelve hours.

Biologic phenomena in wound healing and in transplantation are similar. Every wound in which two wound surfaces are expected to unite represents a condition identical with transplantation. If we reflect that no two separated cells are likely to regain their former opposition after

an incision, then we may also regard the incised wound as a form of transplantation. Observing the same rules in the treatment of surgical wounds as in transplantations, healing and scar formation under average conditions will be optimum without the need for stimulating agents.

Dr Sutton has dealt so ably with the histologic aspects of wound healing that there is nothing further for me to add. Therefore I shall content myself with a few remarks on the clinical significance of these histologic changes.

I should next like to enumerate a few of the cardinal rules for transplantation that are applicable to the treatment of surgical wounds. A razor-sharp scalpel should be used for the incision to cause least direct injury to cells. Tissues should be handled gently, preferably with skin hooks instead of forceps. A blood clot is a dead foreign body that delays fibroplasia until it is absorbed. It is also a potential hotbed of infection. Therefore thorough hemostasis is essential. Ligatures act as foreign bodies and also devitalize tissues by strangulation. Magnus has shown that the capillaries become empty after injury and contract and retract within the tissues. Mechanical irritation, especially pressure, increases the degree of contracture. These experimental observations have been clinically confirmed and amplified—for larger vessels also contract and retract under pressure with hot moist sponges, thus making extensive ligation superfluous.

No surgeon would consider applying alcoholic antiseptic tinctures to the wound surface of a skin graft. Just as little is their use advisable in surgical wounds.

I should like to add a few remarks about the suturing technic. Closely placed, fine, interrupted silk sutures should be used to unite the skin. The skin is undermined to an appropriate distance to relieve tension. The undermining, apart from relieving tension, provides a broad anchoring surface parallel with the skin. If little tension should persist, the dermis is approximated separately with buried white silk sutures. The tissues around such a buried suture, in one of my cases, excised after one year, gave the following microscopic picture. Circumscribed areas of granulation tissue contain, in their center, foreign bodies, surrounded by fibroblasts, round cells, and occasional multinucleated giant cells.

The surface sutures must include the dermis for a proper hold. The epidermis alone cannot resist the suturing thread, not only because of its thinness but also because of mobilization of its cells in the process of healing. The dermis, on the other hand, is tough and resistant and under-

goes no histologic changes during healing (Hartwell)

When is a wound sufficiently healed so that the sutures may be removed? As mentioned in the beginning, the exudative or latent stage of healing, during which the wound edges are united by fibrin alone, lasts as long as four days. During this period the manipulation with scissors and forceps, involved in removing sutures, is sufficient to separate the wound edges. Blood enters the gaping wound and frustrates the attempted fine scar formation. I am accustomed to leave my sutures five to six days and often ten and twelve days. A tightly placed suture does all its damage in twenty-four to forty-eight hours. If

no damage occurs within this time, no further cutting into the tissues may be expected.

In conclusion, I wish to mention that where excision and not incision is required, as for instance in removing unsightly scars, I use oblique, divergent incisions instead of vertical incisions through the thickness of the skin. The resulting width of the oblique wound surfaces produces a larger contact for healing. In addition, when the dermis is united, the opposing epidermal tongues are automatically pressed together and will protrude above the skin level without eversion. After healing, the elevated epidermal edge retracts to normal level with the formation of a fine scar.

### NO SURE PREVENTION OR TREATMENT FOR POISON IVY

There is no certain immunity to ivy poisoning, no certain treatment, and no certain preventive measures aside from the sometimes difficult procedure of staying completely away from the plant, Elizabeth Chavannes, Madison, Wisconsin, states in the May issue of *Hygeia, The Health Magazine*.

Even the person who recognizes the plant, she points out, must be constantly on his guard lest he come in contact with it in some unusual manner. The poison may be inhaled in ash particles from fires or it may be transmitted by means of clothing that contacted the plant without the wearer's knowledge.

The change of seasons has no effect on the nature of the poison, and in the winter a bare stalk surmounted by a cluster of yellowish white berries is just as dangerous as the three leaflets which betray the presence of poison ivy in the summer. The poison pervades the roots and stem as well as the leaves and flowers. Because of the wide distribution of the plant, one should learn to suspect every fence corner, woods, and thicket of harboring it in some form.

"If outdoor work in the vicinity of poison ivy

is absolutely necessary, dress for protection," Miss Chavannes advises. "Wear boots into which overalls or slacks can be tucked, roll down shirt sleeves, fasten collars, wear gloves, but do not nullify all those precautions by wiping your sweaty face with the sleeve or glove. What good is caution outdoors, if the clothing is carelessly removed and hands are allowed to go unwashed?"

Thorough washing with plenty of soap after possible exposure will do much to prevent poisoning. Because ivy poisoning is actually a chemical burn, its treatment should be similar to that of other burns when a rash does develop. One general rule is to apply plenty of warm, moist compresses and to avoid the use of oils and greases, if blisters have formed. Medical aid is advisable if the rash is widespread or infected.

As for immunity, it is purely relative, the author says. Too many people who have counted on natural immunity have found themselves poisoned when they failed to take proper precautions. There has been some success in acquiring immunity by the administration of a toxic agent, but this varies with the individual.

### CONTROL OF VENEREAL DISEASES IN FRANCE

War conditions have obliged governments to reinforce prophylactic measures against venereal diseases. On the advice of the recently created *Haut comité de la population* and of different other agencies engaged in sanitation and moral conditions, the French government has passed some new regulations, several of which had been previously proposed but had evoked popular dissatisfaction as infringing on the liberty of the individual. According to these new measures, as reported by the Paris correspondent of the *J.A.M.A.*, the physician must point out to the patient the dangers involved and the transmissibility of the disease. Moreover, he must report every case to the health authorities. Information given is of a confidential character. Sus-

pected individuals are required, if requested, to exhibit a medical certificate made out by an approved physician indicating that the bearer is free from the disease. The law can compel infected persons to be treated and to submit to serologic supervision. A training course in syphilology is required of medical students. Restaurant keepers, hairdressers, wine merchants, and others are required to employ effective sterilization of equipment and tableware. Drugs sold for the treatment of venereal diseases must conform to approved standards. The effectiveness of the new measures will depend principally on the degree of control exercised by those to whom venereal control has been entrusted.

# PULMONARY APICAL TUMEFACTION SIMULATING BURSTITIS

## Necessity for Routine Chest Examination in Patients with Shoulder Pain

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IT is well known that shoulder pain may be due to local disturbances or referred from a lesion elsewhere in the body. It is also a somewhat commonplace procedure to look elsewhere such as the cervicodorsal spine, cardiovascular, mediastinal, and pulmonary structures when a local shoulder lesion is not demonstrable. In some clinics, routine roentgenoscopic examinations of the chest are done in every case of shoulder pain. It is because this latter practice has been followed that the underlying lesion was determined in the 3 patients herein described, even though sufficient change was apparently present locally to account for the symptomatology.

### Case Reports

*Case 1*—N S, a white male, aged 62, was first seen on May 26, 1936. At that time, he complained of pain in the right shoulder region of four months' duration. There was no history of trauma or of infection either locally or systematically preceding the onset of the shoulder pain. The pain was more or less constant, sharp, and radiating down the outer aspect of the right arm as far as the insertion of the deltoid and to the upper part of the lateral wall of the right side of the thorax. The pain was not relieved by infrared radiation or by diathermy.

The patient was a well-developed, well-nourished male, there were no gross malformations or deformities. The heart and lungs were essentially negative to percussion and to auscultation. Except for the observations in the region of the right shoulder, the physical examination was essentially negative. There was no atrophy of the tissues about the right shoulder girdle. There was some thickening of the tissues over the region of the greater tuberosity of the right humerus, with tenderness to deep palpation. No limitation of motion of the right shoulder or weakness of the right upper extremity were noted.

Roentgenographic examination of the right shoulder taken elsewhere on May 26, 1936, re-

vealed a calcific deposit overlying the greater tuberosity of the right humerus (Fig 1).

The patient was given a series of infrared and diathermy treatments to the right shoulder region without relief of the pain. On July 14, 1936, under local novocain anesthesia in the region of the calcific deposit, an attempt was made to aspirate the mass. It was punctured many times in a fanwise fashion, but nothing could be aspirated. On withdrawing the needle, it was noted that the lumen was filled with an amorphous, calcified material. Following this, the patient was again given diathermy to the shoulder, supplemented by iron cacodylate intravenously. Slight relief was obtained for about a week, but gradually the pain returned and became so severe that the patient could not lie on the affected side. On September 22, 1936, a second aspiration was performed with the same result of aspiration but without relief of the pain. At the time of the aspiration, it was noted that the patient held the arm almost fixed against the side of the body and that abduction of the arm was limited. On October 14, 1936, the patient was operated upon for a subdeltoid bursitis. A one-inch incision was made in the deltoid muscle, the fibers were separated, and the subdeltoid bursa was exposed. The bursa was opened, and within the tendon of the supraspinatus a whitish area was found. The tendon was incised in the line of its fibers, and the whitish mass, composed of amorphous and calcified material, was curetted (Fig 2). Following the operation, the right shoulder was maintained in abduction and external rotation with some relief of the pain. The patient continued to improve for a while during his stay in a warmer climate. However, during the latter part of his sojourn the pain returned and was more severe than ever before. The original x-ray films, taken elsewhere, were reviewed at this time, and an apical lesion recognized (Fig 1). Further roentgen studies, made to include the chest, corroborated this observation (Fig 3).

The pain now radiated down the inner aspect of the arm and forearm as far as the wrist. He began to lose weight and strength, and on March 19, 1937, it was noted that a Horner's syndrome and atrophy of the muscles of the hypothernar eminence were present. Roentgen therapy was



FIG 1 CASE 1 Note the flat calcified deposit in the subacromial region. The adjacent apex shows a dense opacity. See Fig 3, which proved to be an apical tumor.



FIG 2 CASE 1 Study made after the removal of the bursa. Note the tumefaction in the adjacent apex. This and Fig 1 were made elsewhere for the shoulder region and incidentally included the apex. Diagnosis of apical tumefaction was made on reviewing these studies.

instituted and massive doses of radiation were applied directly to the apex anteriorly and posteriorly, with temporary alleviation of symptoms and control of the growth. The tumor then began to increase in size and extended to the mediastinum, and the pain became increasingly severe. It was barely relieved by large doses of opiates. Before death, he presented a picture of extreme cachexia with a superimposed pericardial effusion (Fig 4).

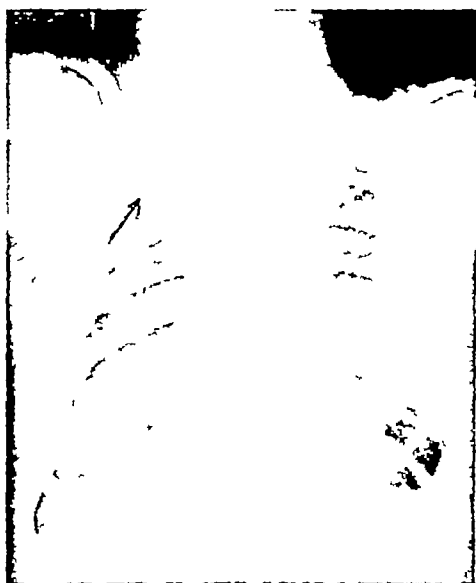


FIG 3 CASE 1 Tumefaction of the right upper lobe. Symptoms and signs of sympathetic and brachial plexus involvement now present.



FIG 4 CASE 1 Tumefaction has extended and there is evidence of pericardial effusion.

The patient became comatose and died on July 22, 1937.

**Case 2**—A white male, aged 71, was referred for roentgen examination of the shoulder and cervical spine because of severe pain in the left shoulder. The pain had been present for several months and was localized at first to the tip of the

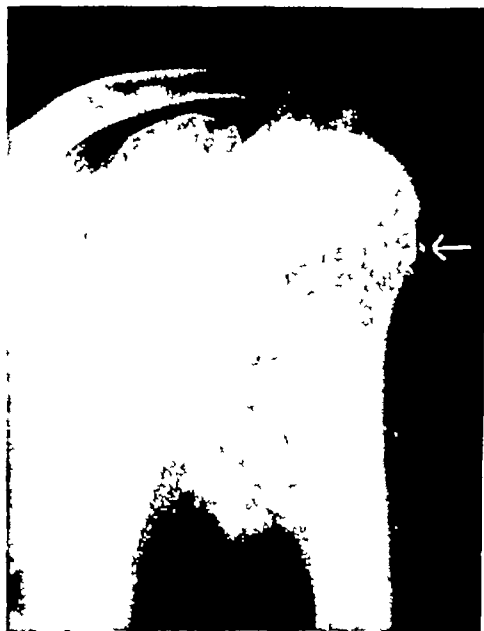


FIG 5 CASE 2 There is a small calcified deposit adjacent to the lower surface of the greater tuberosity that was considered for a time the cause of symptoms

shoulder and to a lesser degree to the surrounding shoulder girdle. Roentgen examination (Fig 5) revealed a calcified deposit below the level of the greater tubercle and hypertrophic changes involving the sixth and seventh cervical vertebrae. The interspace between these vertebrae was narrowed (Fig 6). Examination of the chest (Fig 7) revealed an opacity occupying the entire left supraclavicular region and considerable decalcification of the articulating portion of the third rib.

Soon after these observations were reported to the referring physician, follow-up clinical examinations began to disclose symptoms and physical findings characteristic of brachial plexus and sympathetic nerve involvement. The patient lost weight rapidly and the apical lesion spread in a manner characteristic of a pulmonary apical neoplasm.

**Case 3**—White male, aged 60, gave a history of persistent pain in the right shoulder for the past six months. Previous studies were made elsewhere of the shoulder alone and showed the presence of a calcified bursitis for which he was treated without appreciable benefit. The pain increased in severity and he now showed a lack of perspiration on the side of the face and a suggestive Horner's syndrome on the side of shoulder pain. Pursuing a routine examination, both the shoulder (Fig 8) and chest were studied,



FIG 6 CASE 2 Evidence of hypertrophic changes involving the sixth and seventh cervical vertebrae, also considered sufficient to cause symptoms of shoulder pain



FIG 7 CASE 2 Tumefaction of left apex. Note erosion of third rib. The tumefaction was the true cause of symptoms.



FIG 8 CASE 3 Note the flat calcified subacromial deposit that was considered the cause of shoulder pain. Note also the apical tumefaction and the erosion of the third rib.

and a flat calcified deposit was found in the subacromial region very similar to that in Case 1, characteristic of a so-called calcified bursitis. Study of the chest (Fig 9) showed an extensive dense opaque lesion involving the mesial portion of the right upper lobe extending into the apex. The articulating portion of the third rib was eroded. The pulmonary lesion progressed rapidly showing the classical symptoms of tumefaction of the upper lobe.

Cases 1 and 2 were referred by orthopedic surgeons who considered the shoulder pain characteristic of bursitis, and roentgen studies apparently corroborated this clinical impression. On the basis of these observations in Case 1, several surgical procedures were done to remove the bursa. Although the bursa was finally removed, the pain persisted, and a review of the films made elsewhere (Fig 3) disclosed the apical lesion. In Case 2 the patient had shoulder pain which both the general practitioner and orthopedist felt was produced by either local shoulder or spine pathology, and again roentgen studies served to corroborate their impressions (Figs 5 and 6). Routine study of the chest disclosed (Fig 7) the true cause of the symptoms. In the third instance, shoulder pain was the only symptom for six months before suggestive evidence of sympathetic nerve involvement manifested itself. The referring physician in this instance had reviewed the previous 2 cases and was on

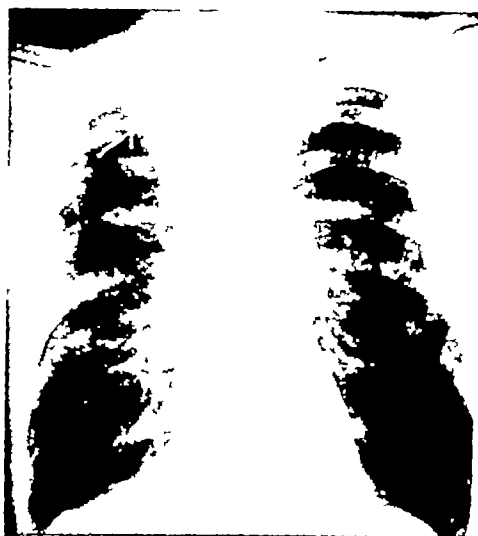


FIG 9 CASE 3 Note the tumefaction of the right upper lobe and apex. This tumefaction proved to be the true cause of shoulder pain.

the lookout for a similar one. As a result he requested chest studies in addition to the routine shoulder examination, and, as mentioned in the case report, the examination disclosed a bursa that could easily have been considered the cause of the patient's symptoms. But again the underlying pathology was an apical tumor of the lung.

As the pulmonary pathology in all 3 instances progressed, other symptoms produced by pressure of the apical tumefaction on contiguous structures presented themselves. By pressure on the brachial plexus and ribs, the growth produced pain, tenderness, and hyperesthesia about the shoulder and axillary regions as well as at other sites of distribution of the nerve fibers impinged upon. Atrophy of the muscles of the arm and hand were late manifestations of brachial plexus involvement. A Horner's syndrome developed in all 3 instances as the lesion progressed due to sympathetic nerve involvement, and in one patient a complete absence of perspiration developed on the affected side. In 2 instances erosion of the ribs could be demonstrated as the tumor expanded. In the later stages, general systemic evidence of malignancy were present.

The necessity of routine fluoroscopic and, where indicated, more detailed roentgenographic examination of the chest is essential in a patient with persistent shoulder pain. This examination should be carried out even though apparently sufficient local pathology is found to account for the symptoms. The lesion was overlooked in the first instance where the examination was first made by one unfamiliar with chest pathology and unaware of this possibility. Familiarity with chest examinations and the ability to interpret chest pathology are essential.

The presence of calcified deposits in the shoulder region, particularly in elderly individuals, is not an uncommon finding in our experience and does not necessarily produce symptoms. Only when acutely inflamed is the lesion painful. The presence of hypertrophic changes about vertebrae particularly in elderly people are as a rule of no clinical significance and do not cause symptoms. They should be considered age changes and no more. Yet, on finding changes of this type about vertebrae, many consider them the cause of pain and omit further examination. Case 2 is a case in point. The final stage in these 3 instances was consistent with the symptomatology of superior sulcus tumors first described by Pancoast. However, in the absence of autopsy and histologic examination, only the diagnosis of neoplasm in the upper lobe was justifiable.

In the late stages of apical and mediastinal lesions, symptoms and signs other than shoulder pain are present, and our attention is immediately directed to other areas aside from the shoulder girdle. However, where the symptoms are confined entirely to the shoulder and particularly where pathology is found locally, one, as a rule, does not think of other possible causes. It is only by adopting a routine procedure of at least fluoroscopic the chest of every individual with shoulder pain, particularly elderly people, that lesions of the type reported will be recognized. Any suspicious lesion visualized fluoroscopically should be carefully studied by more detailed roentgenographic examinations.

### Conclusions

The necessity for routine chest examinations in patients with shoulder pain is pointed out where apparently sufficient local pathology is found to account for the symptoms. Three cases are reported showing calcification about the shoulder with neoplasm of the lung. A calcified bursa or peritendinous calcification is not infrequently asymptomatic.

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### AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF ORAL DIAGNOSIS

The annual meeting of the American Association for the Advancement of Oral Diagnosis will be held on October 17 and 18, 1940, at the Academy of Medicine Building, 2 East 103rd Street, New York City.

This meeting will come the end of the first week of the Graduate Fortnight of the Academy, both physicians and dentists of the organized medical and dental professions throughout the Western Hemisphere who are members in good standing in their respective organizations in the

countries in which they practice are eligible for membership in the Association, the constitution provides for the organizing of regional divisions by members of both professions who have such standing and are members, said divisions are components of the American Association for the Advancement of Oral Diagnosis.

For further information and membership blanks address Dr. H. Justin Ross, Executive Office, 515 Madison Avenue, New York City.

### SCHOOL AND PUBLIC HEALTH WORKERS TO MEET

The Annual Conference of Health Officers and Public Health Nurses of the state will be conducted at Saratoga Springs, June 25-27, inclusive, with headquarters in the Grand Union Hotel, according to an announcement by the

State Department of Health. The sixth annual meeting of the New York State Association of School Physicians will take place in conjunction with the conference on Monday, June 24, in the hotel.

# MODERN CONCEPTS OF MENTAL ILLNESSES

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IN REVIEWING the subject of some of the concepts of mental disorders there is a strong temptation to look back and to contrast the present situation in psychiatry with the old order which has changed so rapidly and so significantly within the past fifty years. Instead, this paper will discuss the present situation, outlining some of the facts and the relationships of modern psychiatry and stressing particularly some of the ways in which it has changed or has widened its scope from that of even two generations ago.

It may be confessed at the outset that developments have been so rapid and so widespread that the psychiatrist himself is often bewildered as to where the boundaries of his field now are and equally so as to where they may be tomorrow. We now view, as of psychiatric nature many problems that were not granted that designation at the beginning of the century. Evaluations and attitudes that then seemed comfortably settled have been abandoned or have had their faces lifted so that their old friends would hardly recognize them.

Even the definition of mental illness must now be restated in accord with modern trends of thought. Formerly it referred to the more outspoken psychoses, and its occurrence meant placement in a so-called "asylum." Today we are inclined to regard as indications of a mental illness those bodily, psychologic, and emotional factors that, over a period of time, impair one's customary capacities for living his life as efficiently and as comfortably as before. It is obvious that such an enlarged definition includes greatly increased numbers of individuals and that it increases many fold the types of problems with which psychiatry now concerns itself. Thus, for example, where we once dealt with the rages of epileptic furor, we may now study and treat the individual

whose lack of emotional control merely interferes with his steady holding of jobs. Or where once paranoid delusions took a patient to a hospital, office practice now deals with an individual because he complains of being too sensitive to get along comfortably.

Likewise, the very purpose of psychiatry has become different and more inclusive. It was once a question of proper segregation and humane management of the insane. Today psychiatry, while still serving this important function, has added many other objectives. They may all be included in two general points of view: the one, with regard to the person himself, the other, from the standpoint of the social group of which he is a member. Accordingly, we may speak of a personal psychiatry and of a social psychiatry. Actually, of course, their purposes and results merge, but they accent different details of the total interrelating situations. Thus a man may be admitted to a hospital to help him overcome an excited, destructive psychotic condition so that he may return to his normal activities of life. But at the same time his hospitalization contributes to the maintenance of the general social equanimity and the preservation of the social order which represents our culture.

In psychiatry as in medicine generally, prophylactic treatment has been attaining ever greater importance. We have learned much about the reactions of a human being to the strains, the opportunities, and the gratifications inherent in the life of today. Studies, both theoretical and clinical, have greatly enlarged our understandings of both quantitative and qualitative human reactions. With this vastly more humanized approach to living as a phenomenon in its own right, experience has accumulated to indicate how and where difficulties of adaptation are





and also of his responsive reaction to the world in which he lives. This view has simplified our psychiatric conceptions to a marked degree. It has done much to take the sense of mystery away from mental illness.

The concept of psychobiology leads us to think of a stage, the setting in actual life, upon which is being enacted an ever changing interplay between two forces. There are, on the one hand, the pressures and limitations of external reality including social restrictions and expectations, and, on the other hand, there are the instinctual forces of the individual. With our increasing respect for the laws of cause and effect we have come to feel that it should be possible to develop an increasingly clear understanding of human behavior and motivations through studying the individual's life facts and experiences. Whereas Krepelin saw these facts as occurrences that could be listed, we now think of them as indicators of the forces of human strivings and urges for accomplishment. Just as, with the development of calculus, mathematics began to deal with modes of change, so psychiatry has become less interested in static phenomena of mere "existence" and correspondingly more concerned with the dynamic phenomena of "becoming" or of "striving."

We are now ready to consider the concept of functional illness about which so much debate has taken place since the beginning of the century. Psychiatry tends increasingly to concern itself with human life and the living of it. Life is not static. When we cease to change, we die. Therefore the organic structure of an individual is, in itself, not so important to us as is the use one can make of it. Although most of us have the proper number of fingers and thumbs, there is but one Paderewski. Mere structure—that is, the organic endowment of an individual—only gives one certain potentialities and certain limitations. Thus, our organic equipment with eyes in the front of our heads, while it does give us the capacity for vision, also precludes the possibility of seeing what is directly back of us. It does not, however,

determine what use we shall make of our eyesight in the directions in which our eyes do point. It is a conception of modern psychiatry that whatever use, in actual behavior, is made of our various human capacities will be determined by the expressive force of the instinct drives and that these latter will of necessity take a form that is forced upon them by the limiting facts of external reality. To make a simple illustration, if one has the urge to walk straight ahead, he can proceed until some obstacle such as a building or a precipice confronts him. The hungry man is driven by his appetite to eat ravenously, but, if he has only a single biscuit, he will then stop eating even while the urge to eat still continues. In other words, the drives of human conduct may be regarded as forces that will produce certain types of results within whatever modifications and restrictive limits the real world imposes.

Some of these restrictions are tangible and external, such as the steel safe, which prevents a burglar from taking its contents. Others are external but less immediately tangible, as, for example, the impending arrest, court action, and prison if he robs the safe. But still other deterrents are internal to ourselves, and here again some are tangible while others are not. If one suffers a severe osteomyelitis of the ankle, he may not be able to walk to the safe to steal its contents. We have here another illustration of the relationship of organic impairment to functional activity in which the totally integrated behavior of a man becomes altered by a physical disease of one part of him—his ankle. The surgeon who operates and cures the ankle is not only removing a local infection, an organic defect, but at the same time he is changing the patient's balance of self-expressive capacity. When cured, the patient may once more rob the bank, or kick the cat, or run for his train. Psychiatry sees then, in the facts of a person's environment and in his physical physiologic equipment, the inventory, as it were, of his possibilities of behavior. This is not so different from the way an obstetrician will measure a pelvis and

likely to occur. This is true of environments and of occupations as well as of personality developments and the evolutions of instinct life. Accordingly, we now have preschools, vocational guidance with its aptitude tests, and various other organized efforts to avoid or to lessen psychotic breaks or such lesser maladjustments as may be prevented by a wise forethought.

Another of the concepts concerning mental disease that has significantly changed in recent years is concerned with the relationship of the psychiatric physician to his colleagues in the treatment of his psychiatric patients. Once the psychiatrist was practically isolated and hardly kept in touch with the work of his confreres. How different things are at present when he calls upon the consultant advice and treatment of the internist, the surgeon, the aurist, the pediatrician, the gynecologist, or in fact on any or all of his colleagues who can contribute to the improving of the patient's total health assets. Nowadays we feel that a correct treatment of the psychiatric patient cannot depend alone on a careful synthesis, unless an effective analysis of the various part functions finds them capable of group functioning. Obvious though it seems, it was not formerly recognized that a patient's so-called "neurotic" concern about his lungs could not be properly treated if he had an actual asthmatic condition. Psychiatrists are learning to call with increasing frequency for other medical help as a necessary factor in re-establishing more healthy psychiatric balances in their patients.

In the reverse direction there is an equally significant modification of the old conceptions regarding mental disease. You are being addressed by a psychiatrist, the implication being that the medical specialists and general medical practitioners now feel that psychiatry has something to offer them, even in their treatment of cases not predominantly of a psychiatric nature. One has only to think of the careful psychiatric estimate that is now so frequently called for by the surgeon who proposes to operate for the

relief of toxic thyroid symptoms, or of the delirious symptoms that in the course of some febrile illness may cause concern lest they presage some ominous psychotic complication.

With one medical specialty—neurology—psychiatry has the most intimate connection of all. The mind and its functioning can exist only in and through the presence and the preservation of a fairly intact anatomy and physiology of the central nervous system. Probably psychiatry and neurology are not only twin brothers but Siamese twins, impossible to detach from one another without doing serious damage to each. Yet the worker in each field can, to a certain degree, follow the accent of his own specialty. The close interrelationship of the two is evidenced in the large number of medical schools that now combine the professorships of neurology and psychiatry in a single chair. Mention may be made here of the epoch-making contributions of two great men, Sir Charles Sherrington and Ivan Pavlov, whose studies of integrative action and of reflex conditioning have been invaluable alike to neurology and psychiatry. We are still, perhaps, a long way from knowing the neurologic facts of a wish or in what way there is a neurologic difference in our memory of lines from Goethe and of lines from Longfellow, but we are more convinced than ever of the importance of such differences for ultimate understanding. Perhaps the further developments of electroencephalography will add to the illumination of these vitally interesting questions.

Many of the recent trends of psychiatry are included and implied in the term that we so often see used nowadays—that of "psychobiology." We owe the word to Adolf Meyer who perhaps more than anyone else has developed the present broadened basis for psychiatric understanding. This conception refers to a fundamentally simple fact, namely, that man functions as a life process in which his total self interacts in what ways are possible to it with the environment that surrounds him. Whatever he does, thinks, or feels is an expression of his being a living creature.

of psychoanalytic theory are not only compatible with a strictly organic background but actually presuppose it. From the beginning, Freud and his followers have emphasized that their descriptions refer to the psychic phases of phenomena deeply grounded in the facts of endocrinology, physiology, or organic pathology. Thus, we read in the standard psychoanalytic works such statements as "It is impossible to ignore the soma in any consideration of conversion symptoms", or again "The libido itself is naturally thought of as a correlate of hormonal substances."

Even its proponents have recognized that psychoanalysis as a therapeutic method has a very limited field of usefulness. Among psychiatrists there is, by this time however, a widening acceptance of the usefulness of the psychoanalytic principles for discovering the "how" and the "why" of large parts of human conduct and of the aberrations of this conduct in mental disease. There can be no doubting that the interpretative tenets of psychoanalysis have been of enormous effect in changing the points of view of psychiatry in the last thirty years. It must also be admitted that the change has been of benefit. Even though, as was the case with some of the older theories of chemistry, it is found necessary from time to time to revise certain of its concepts, nevertheless we have obtained, through its application, a more penetrating comprehension of human behavior.

The elements of the psychoanalytic conceptions are relatively simple and easily understood. They embody the psychologic facts of the formations of mental concepts and of the associational linkages that may or may not be formed between them. Study of an individual patient may show that there is some frequent difficulty in his combining certain conceptual notions that he should be able to combine in order to adapt himself efficiently to his living conditions. For example, when he thought of "home," he might regularly be unable to associate with this concept the notion of his home address. For such a symptom, explanation would be offered that the mental

operation of associating concepts is facilitated or inhibited, depending upon whether the elements concerned have a pleasant or an unpleasant or a comfortable or a painful emotional feeling tone connected with them.

Upon studying in careful detail the mental and conceptual life of a person, it is possible to discover various types of blockings to his easy formation of associations between certain of his mental images or ideas. But the fact is that our adaptations to life, to reality, and indeed to our own thoughts themselves are made possible only by combining the various mental items that are relevant to the particular issue. Accordingly, whatever impairs the capacity for making associations will make it more probable that the resulting judgments, lines of reasoning, attitudes, or decisions may be inaccurate, incomplete, or, in extreme cases, nonapplicable to the real situation.

Seen from this point of view, the illness of a psychoneurotic person may be envisaged as comprising a group of incomplete or inaccurate reactions to reality. They are incomplete because, due to the individual's emotional discomfitures regarding certain matters, he is unable to combine enough of the relevant mental material to come to efficient conclusions. If one merely did not see what he was striving for in life because he was not introspective enough to look, he might nevertheless proceed uninterruptedly in his quest toward his goals. But the person who is actively prevented by inhibitions from recognizing clearly what goes on in his own mind has an added handicap during his strivings that may be repeatedly interrupted as he works toward his objectives.

Reference was made above to the constraint produced by disagreeable or painful emotional states. In the developments of a civilization and culture so complicated and so idealized as ours, it not infrequently happens that our learned attitudes must be trained in direct conflict with the fundamental instinctive drives that were present earlier. Sooner or later then, it inevitably results that there are

determine whether spontaneous delivery can occur

Function should not be considered as the possible behavior compatible with the existing organic structure but rather as the actual responsive and self-expressive changes that do occur. What does it matter that a man has the proper muscles, bones, and joints to do paperhanging, while he is actually working as an accountant? The facial musculature may be able to produce a smile when actually one is not smiling. The psychiatrist is not so much concerned with his patients' functional potentialities as he is with the patterns of function that his patient actually makes use of. Therefore, he sees such organic physiologic-pathologic problems, as brain tumor, leg amputation, or cardiorenal disease, chiefly from the standpoint of the real limitations in the number of functional patterns that they incapacitate.

This may sound somewhat involved but it means simply that psychiatry grows more dynamically minded and hence does not regard organic facts of structures or diseases primarily as ends in themselves. Rather they are evaluated as being necessary accompaniments and essential mechanics for the carrying on of human life activities.

We can detect in the above statements an implication that the organic facts of anatomy, physiology, health, and disease can all be thought of as component parts of the problems of function. Let us hasten to add the obvious truism that all function must be expressed in and through actual material structures. Our imaginations rebel at the notion of the Cheshire cat's grin existing with no physical attachment. Bleuler has been one of the leading advocates of the needlessness—even the impossibility—of attempting to separate our notions of body and of mind. He insists, and we may well agree with him, that central nervous system activity and mental behavior are practically inseparable and that theoretically they constitute but different phraseologies or aspects of the same phenomena.

Such work as the classic studies of Can-

non on the relations of the mental and bodily states has broadened our conceptions of an intimate relationship between the psychologic-emotional and the anatomic-physiologic aspects of man. The endocrinologists have made great advances in working out these relationships. More and more we find it necessary to take into account the effects of the mind upon the body and the repercussions and counterinfluences of the bodily processes upon the mind. It seems no longer possible to draw any but an artificial line of distinction between these elements in any given situation. Take, for example, the following familiar illustration. A man's house burns (fact of external reality), he becomes depressed (mental-emotional state), intestinal motility and secretion of bodily glands diminish (physiologic response), appetite wanes (instinct modification), weight is lost, and sleep grows poor with resulting fatigue (somatic response), disinterest and depression increase.

Here we see such closely related evidences of physical and emotional and psychologic interaction that it would hardly be possible to consider any one phase to the exclusion of the others. Some of them would be called organic, some of them seem to be "functional." But the important point is that all of them are the activities of a living person who is responding in these various ways, plus numerous others not enumerated above, to the particular facts of his life situation that confront him at that time. Can we not say then that the old attempt to differentiate the functional and the organic was an inappropriate and deceptively artificial effort?

Reference should now be made to a very important development in the thought and the psychiatric understanding of the last few decades. It is especially fitting that we consider, at this point, the doctrines of the psychoanalytic approach to the study of behavior, when the close interconnections of functional and organic elements have just been reviewed. Not many of those without psychoanalytic study and training know that the tenets

of a mental patient in deciding between two or more available nurses to be assigned to his care. Or again the psychiatrist in charge of the case may be substituted by another member of the staff in order to secure a different sort of interpersonal relationship.

Even yet there is, curiously enough, very little uniform agreement or clear-cut recognition as to the actual machinery of psychic therapy. The psychiatric interview is, however, being subjected to scientific scrutiny so that it is possible to make a more objective description of some of the roles played by the psychiatrist. This means that he is becoming more able to employ a scientific self-consciousness with which to study, check, and improve the methods he uses in the therapeutic interview.

It is no longer regarded as sufficient for the psychiatrist "just to talk" with his mental patient or to use the one-time empirical and intuitive method of approach in his psychotherapy. Accordingly the writer has proposed that selective use be made of one or another of various possible roles on the occasion of each psychiatric interview, the selection to be based in part on the patient's condition at the moment and in part on the therapeutic purpose of the physician. As examples of these various therapeutic roles the following may be listed. The physician may remain quite passive being merely an interested listener, sometimes he may allow himself to be used as a target at which the patient's pouring-out of his mental contents may lead to improved understanding of the problems, or again, he may have to be an explainer, a lecturer or a pointer, a comforter or a desensitizer, then there are other roles in which the physician adopts a more vigorous authority as when he takes the part of a negotiator, a philosopher, or a manager.

While these roles suggest that the psychiatrist is employing a participative method of therapy, the last-named role, that of manager, indicates another phase of treatment—a perpetrative therapy in which the physician does things to his patient. As an example of this method, you

know of the most recently suggested treatment of dementia praecox with hypoglycemic shock therapy and with convulsive therapy with camphor or metrazol. The conservative psychiatric opinion at present favors more investigation of the results of insulin and metrazol treatment before casting a final verdict, but it is generally acknowledged to be the most important suggestion that has come forward in many years for treatment of the largest group of mental disease we have. Thus far, an insufficient time has elapsed to allow observation of what could be called end results of this therapy.

One radical change in our attitudes is worthy of an especial emphasis. In their feeling of helplessness to deal with the acute or violent symptoms of mental disease our predecessors found the use of mechanical restraint not only reassuring but as they thought "quite necessary." The restraint sheet, the strait jacket—even the use of handcuffs and shackles—are unfortunately not yet completely abandoned. But especially in the more progressive states, such as Massachusetts and New York, their use has been vigorously limited by the Department of Mental Hygiene. In this state no form of restraint is now permitted in a licensed mental institution except a camisole or a restraining sheet. It cannot be applied except upon the written order of a licensed physician that states the date, the patient's name, and explicitly the reason for its use. Even then it cannot be continued for more than two hours consecutively. The same rigid restrictions apply to the seclusion of a mental patient by placing him alone in a room from which he cannot make his exit by his own efforts. As an additional safeguard, each hospital must keep a special record book in which is entered, in all the details mentioned above, every individual instance of application of restraint or seclusion. The book must always be available and up to the minute for inspection by a representative of the Department of Mental Hygiene.

In our own hospital, mechanical restraint and seclusion were entirely abandoned years ago, and I can tell you from

numerous details of action and of thought about which we have oppositely directed emotional attitudes. As experience ripens, we have to learn to ignore an inacceptable urge and to stress the contrarily directed motivation because it is more compatible with the demands of life. This process of ignoring, if it is in the mental field, consists of more or less successfully inhibiting the formation of associations between the undesired material and the rest of the mental content. Simple as this is, it constitutes, nevertheless, the freudian notion of the "unconscious" which has caused so much discussion in recent years.

Another great impetus to the broadening and deepening of psychiatric interest and to the employment of a psychiatric approach to the problems of mankind has been the rise of the mental hygiene movement. Although the first committee for mental hygiene was founded as recently as 1908, there are already organized branches in fifty-seven nations, and the effect of its activities in enriching the conceptions of mental illness are incalculable.

Mental hygiene was necessary to teach psychiatrists as well as the lay public a more sympathetic and more flexible attitude toward mental difficulties. It has injected a more scientific approach to the subject than has any other one movement. One of its earliest objectives was to improve conditions for patients under treatment in mental hospitals. With our present-day conceptions of standards for care of the mentally sick, it is appalling to realize what different conditions surrounded the psychotic in earlier days. The insane, the defective delinquent, the nonpsychotic senile, and the indigent poor of all ages were apt to be huddled together in one group. The actual medical care of the psychotic was often practically nonexistent. As the mental hygiene surveys and studies have gone forward, a truly remarkable improvement in every aspect of these circumstances has been brought about. As examples, there may be mentioned not only the segregation of epileptics, feeble-minded, and psychotics in separate institutions but also the

equally significant education of the public mind to understand that such changes are important and necessary.

Indeed the educational activities involved in the mental hygiene conception constitute one of its largest fields of influence. A result has been an ever widening understanding by the general public of the facts of mental disease, its causes, its course, its treatment, and its outcomes. Despite the tragic inculcation of doubts that is created by the occasional sensational newspaper attack upon our mental institutions, mental disorders nowadays are steadily approaching, in the public mind, their rightful place along with the other maladies to which mankind is heir. That stigma, which rather understandably was attached to psychoses when they were believed due to demoniac possession, is decreasing because, from many avenues of dissemination, relatives are learning to recognize their patient's trouble as having adequate causes and as developing by increasingly comprehensible steps.

Studies of the actual needs of mental patients have resulted in a great variety of improved regimens. Insufficient amounts of nursing care have been greatly remedied because it has been recognized that the nursing function is an active factor contributing toward restored health. Proper methods of employing patients with occupational therapy, gymnastic activities, and graduated exercise have come to be recognized as essential components of treatment. The benefits to be derived by the use of properly prescribed forms of hydrotherapy are now generally admitted.

We may regard it as a change of marked significance that psychiatry today pays so much attention to the individual personal relationships between the patient and his nurse or physician. We hear increasing use of the term "relationship therapy." By this is meant the attempt to make use of human relationships from such a level of understanding that they will yield information about the patient's problems and may also be helpful in aiding him to improve his adaptation. Nowadays one gives consideration to the personality type

money, and effort. This is easy to recognize, but what was not recognized for a long time is the equally obvious fact that juvenile delinquency and criminal or anti-social conduct are actually themselves forms of mental illness. All of them are behavior anomalies, unacceptable to the social group to which they are dangerous or disturbing, and all of them are attempts by the individual at a self-gratification or self-expression which might be obtained in more efficient and appropriate ways if properly guided.

The growing understanding of this fact has created a noteworthy modification of the legal conceptions of mental disease. It has become increasingly evident that our laws, as printed in the statute books, do not accurately represent the present attitudes toward these matters. At the moment, however, neither psychiatrist nor jurist is able to formulate completely satisfying statements of the situation. Here especially we are in a state of transition in which the need is more apparent than is the remedy. We can ask but we cannot with any assurance answer such questions as the following: What difference exists between the antisocial behavior of the known psychotic person and the so-called "criminal?" What are the purposes and what are the results of punishment? What are the limits of responsibility and irresponsibility? Even from the asking of such questions we may see a trend of changed modern conceptions. There is more than humor in the newspaper picture of a small boy being dragged off to the woodshed by an angry father because he has just enabled the family cat to eat the goldfish out of the bowl, this boy remarking hopefully "Don't whip me, Pop! I'm insane!"

With such a number of alterations in the conceptions and attitudes concerning mental disease, it was inevitable that significant changes should take place in the way psychiatry was taught to the medical student and to the nurse in training. Not only has such change occurred but in addition teaching has come to include psychiatry in the curriculum for other than medical students and nurses. When the

relationship of psychiatry to various other types of human approach was better realized, it was natural that courses concerning mental disease and behavior problems should be added to the curriculum of the law school. Conceptions of mental disease have been such important additions to the training of social workers that special courses are given to develop the so-called psychiatric social worker, while even the pupil nurse is given a more careful grounding in psychopathology than was available in the best medical schools of the land two generations ago. Whereas an entire course in psychiatry might then consist of six or eight hours in which a few "crazy people" were briefly shown, medical schools now devote increasing numbers of hours in the last three years to a combination of lecture material with actual ward and clinic work with psychiatric patients.

The present trend in the teaching of psychiatry stresses it as being a coloring and an attitude for every physician to apply to all of his patients. You do not need to be told, for it is your everyday experience, how large are the numbers of individuals, seeking other types of treatment, who are found to have significant need for mental adjustments. A certain amount of this should be done and fortunately is being accomplished by the general practitioner or by the nonpsychiatric specialist, for it is he to whom the patient usually comes first for help. And he it is who usually must decide whether the situation demands that somatic treatment remain primary or whether the psychiatric maladjustment has attained preponderating importance. This is as it should be. Just as medicine works toward an ideal state of affairs in which there would need to be no physicians, so psychiatry strives in such a direction that, if it could be realized, the need for psychiatrists would vanish.

The foregoing discussion of some of the modern aspects, trends, and developments in the field of psychiatry has shown that it touches every human activity from the cradle to the grave. Perhaps a fitting close would be a summarization of the



personal experience, corroborating the general observation in other progressive hospitals, that it is actually easier, safer, and simpler to manage even the acutely disturbed patient without those means that used to be regarded as utterly and obviously indispensable. One patient during years of seclusion had reacted much like a ferocious gorilla, but when seclusion was abandoned, he promptly became a sluggishly happy, thoroughly inoffensive patient.

But psychiatry is no longer practiced only within the walls of state hospitals. Hospital outpatient clinics and follow-up clinics have significantly lessened the number of patients who must remain or even be admitted to institutions. And, as less severe and less advanced problems are recognized as needing treatment, office practice has become a significant realm of psychiatric therapy. Indeed as psychiatry has developed its clinical understanding, its therapeutic skills, and its modification of the public attitudes toward the mentally ill, it has grown more feasible to manage even fairly ill patients while they reside in the community.

All this emphasis on the human, personal, individual aspects of mental disease has led to a further development. It is recognized that each mental illness may be considered as a resultant pattern toward which a large number of factors acting over a period of time have contributed. An early development naturally consisted of studies into "precipitating" etiologic factors of mental disease. A natural outgrowth of such study brought us to the consideration of somewhat earlier-acting influences that could be seen as "predisposing" factors conducive to the problems even when they did not seem immediately causative. Hence, as with tuberculosis work, there has been an increasing tendency to feel that it is not enough to deal with a mental illness only after it has become established. This is another of the results of the mental hygiene and the psycho-analytic movements. A practical attempt at therapy for mental disorders is now regarded as including the study and analy-

sis of etiologies, with the purpose of using prophylaxis as the best means of treatment.

There has resulted a significant change in the philosophy of our approach to the problems of mental illness. Investigations have been carried forward in every avenue of human development with a view to determining its psychiatric potentialities. Thus, school curriculums have been modified in order better to meet the needs of a greater number of personal variations in the student body. Industrial psychiatrists have tried to determine the probabilities of comfortable and efficient adaptation of prospective workers so as to reduce the level of social and personal discontent and economic inefficiency. Vocational guidance bureaus are learning how to aid individuals in fitting themselves more effectively into the world's work.

But even here the interest in studying the earlier circumstances leading to mental disease has not been satisfied, and institutions have been established looking toward the creation of better rounded, sturdier, and more flexible personalities—personalities that will not succumb so readily when subjected to the stresses of adult living. Our courts have realized increasingly that the so-called "juvenile offender" should be dealt with as a "juvenile delinquent." Since the inauguration by Judge Ben Lindsay of the juvenile court system, emphasis has been focused as never before upon the causes of delinquency. This movement has led to the present-day child guidance clinics of which there are now 257 in effective operation throughout the country.

It is obvious that such effort at correction of undesirable traits is a more effective, a simpler, and a far less costly procedure than is the effort to deal with the problems of mental disease or criminal behavior later in an individual's life. The money spent in keeping a criminal in a penitentiary through a twenty-year sentence might well have given him social and personal stabilization through child guidance clinic treatment during his earlier life and with a significant saving of time,

# INFECTED RENAL CYST

BERNARD DAVIDSON, M D, Brooklyn, New York

(Attending Urologist, Beth Moses Hospital)

THE "solitary" or serous cyst of the kidney, considered clinically a rarity before the advent of urologic investigation, is found quite commonly at autopsy<sup>1</sup> With the introduction of the x-ray, cystoscopy, pyelography, and excretory urography, these serous cysts are frequently discovered in the living and are occasionally diagnosed preoperatively, though often mistaken for true tumors of the kidney About 315 cases have been reported in the literature<sup>2</sup>

While it has been estimated that the kidneys of which these cysts are part have associated pathology in 35 per cent of cases, the solitary cyst itself is only rarely the seat of disease

There may be hemorrhage into the cyst in which case it becomes a "hemorrhagic" cyst. But there is considerable divergent opinion on this point, some observers<sup>3</sup> believing the "hemorrhagic cyst" to be a distinct entity

Among other diseases to which renal cysts may be subject the following have been reported rupture of cyst,<sup>4</sup> calcified cyst,<sup>5</sup> 2 cases of cysts associated with calculi,<sup>6,7</sup> tuberculosis in a multilocular cyst,<sup>8</sup> hypernephroma and carcinoma in wall of cyst.<sup>9</sup> Hydatid cysts of the kidney have a different etiology and pathology than the serous cysts

If the almost obsolete procedure of puncturing a cyst is carried out, infection and suppuration may occur in the cyst. Spontaneous infection, on the other hand, is quite rare and I have been able to find only 5 cases reported in the literature No reference to this condition has been found in any of the several standard textbooks of urology consulted Braasch,<sup>10</sup> in discussing Quinby and Bright's paper on solitary renal cysts,<sup>11</sup> states that secondary infection of the cyst is occasionally observed, with resulting fever and pain H B Sweetser<sup>12</sup> reported, in 1929, a case

of large infected cyst of the upper pole of kidney, and he gives a reference to another infected cyst reported by Patel and Mallet-Guy<sup>13</sup> in April, 1925 Two cases of suppuration in large renal cysts are reported by J Cibert<sup>14</sup> in 1937, who gives a reference to a case reported by Botta Micca<sup>15</sup> in November, 1930 Four of these cases of suppuration occurred in adult females and one in a male The case to be reported below occurred in an adult female This case is unique in the fact that the kidney was the seat not only of an infected cyst located in the midportion but also contained a serous cyst at the upper pole It resembles the case reported by Barney<sup>16</sup> in which there was a hemorrhagic cyst at the lower pole and a simple serous cyst at the upper pole of the kidney

There were great difficulties in arriving at a diagnosis in our case but by waiting and recystoscopy the patient an almost correct opinion was ventured preoperatively

## Case Report

R S, female, married, age 40 years, housewife, was admitted to the Gynecological Service of Beth Moses Hospital on December 13, 1937, complaining of pain in the back and in the right lower abdomen Her menstrual cycle was normal, her last period being on November 24, 1937, and lasted only one day instead of the usual two days For the past two weeks patient had been complaining of pain in the right lumbar region and abdomen which had become more severe in the last twenty-four hours, there was slight nausea but no vomiting Bowels moved with enemas—no urinary symptoms She also had a mild upper respiratory infection at the time of admission Three years previously she had a laparotomy and right salpingectomy performed for ruptured tubal pregnancy She made a good recovery in about two weeks without any morbidity Urine examination at that time was entirely negative

Examination of the abdomen revealed a well-healed, low midline incision, abdomen was

issues concerning psychiatry today In the absence of any such outline known to me, I suggest that we think of psychiatric activities as covering eight fields or areas These are the problems intellectual levels and their adjustments, school adjustments, special mental capacities, interests, and disabilities, emotional and personality adjustments, objectives, ideals, beliefs, and unenlightenment, social and recreational adjustments, psy-

choses, and physical adjustments insofar as they relate directly to mental problems Such an enumeration of the fields of interest to psychiatry illustrates not only the broadening scope of psychiatry itself but also the establishing of integral affiliations and of close working relationships of the psychiatrist with a large group of fellow workers who likewise are interested in human welfare, efficiency, and happiness

### BEFUDDLED LEGISLATION

"A lot of befuddled legislation is being presented for passage in Congress and in our state legislatures these days All of it is based on the premises that the cost of medical care is too high in America and that medical care is inadequate

"I challenge both premises

"Americans are the healthiest people ever seen any time, anywhere. Their health depends upon healthy minds and souls as much as upon healthy bodies

"You cannot go out and buy five dollars' worth of health. And by the same token, you cannot purchase health by immense appropriations of money if, at the same time, you take away the dignity and rights of the human being

"A series of bills was introduced in the Wisconsin legislature a few years ago which would have fastened compulsory sickness insurance, worse than anything in Europe, on the state of Wisconsin. They said there was an acute need for such legislation, but apparently the acute need was really for the doctors and the dentists to put a little emotionalism into the presentation of their own objectives—because we stopped the Beumiller bills by only six votes!

"As a result of that vote, however, we made an extensive study of medical care in Wisconsin, and we sent Mr Crownhart to Europe to investigate the European systems after which Beumiller had patterned his legislation. We found that the Irish and the Germans in Milwaukee are far healthier than the Irish in Ireland or the Germans in Germany

"Nothing in Europe could compare with our system of medical care in Milwaukee, Wisconsin, or in any other center of the United States.

"Since 1929, we have had bankruptcy in government in the United States, and yet there are people who would crowd our bankrupt government into the administration of medical care to the sick

"In America we have a Constitution and a Bill of Rights We determine our course by mutual cooperation, not by paranoid dictatorships We should understand what a sickness tax will and will not mean. In the first place, it will mean graft because a sickness tax is too big a bait for any politician. In the second place, it will not mean better health If it did mean that, there would be better health in Europe than there is today

"In any case, health is not an end in itself, it is a means to an end The purpose of medicine is not to generate healthy brutes but to aid in the generation of healthy, well-balanced human beings, and the souls of human beings are more important than their bodies! Never should we forget that many magnificently healthy people have crippled bodies Many who have contributed most to our welfare have suffered from incurable ailments

"To make people believe that you can buy health over the counter—so much health for so much money—is to put false ideas into their heads"—*Dr Eben J Carey, dean of medicine at Marquette University*

### NEW EYES FOR THE NEEDY

In response to an inquiry, the Executive Officer of the Medical Society of New Jersey has received a most interesting letter from Mrs Julia Lawrence Terry, of Short Hills, New Jersey, who is pleased to be called "The spectacle woman," although she calls her work "New Eyes for the Needy"

Mrs Terry writes "I was working as a volunteer in Red Cross relief in New York City in 1932-1933, when I discovered the appalling need for spectacles among the very poor Ever since that time I have collected old discarded spectacles All the old age lenses that are in good condition are sorted by a volunteer optician, fitted into tortoise-shell frames, and sent to needy persons, or new lenses are supplied Each

applicant must send or bring a prescription from an eye doctor

"This work is maintained from the proceeds of the sale of old gold from the spectacles that are donated, a dealer paying a special price for the recovered gold The work is maintained by receipts from this source, and there are no overhead charges I have received over five thousand gold frames from all over the United States

"I plan to establish branches for this service and will be pleased to mail a description of the plan to every inquirer"

This is a worthy cause for the Woman's Auxiliary of the Medical Society of New Jersey to sponsor, suggests the editor of the state medical journal



FIG 1 Rectangular-shaped right pyelogram with absence of calices after injection of 6 cc of hippuran

had the same appearance as the retrograde pyelogram

On the right side a fair urogram was obtained after forty-five minutes. This differed very much from the retrograde pyelogram. Three calices were outlined and seemed to be drooping, the middle and lower calyx appeared elongated and blunted, the upper ureter appeared to be dilated, the pelvis appeared smaller than the calices. A globular shadow was seen in contact with the convex border of the kidney.

As the excretory urography showed that the right kidney had some function, patient was again cautiously examined with a cystoscope, December 30. Bladder urine was hazy. Generalized congestion of bladder mucosa was noted. Right ureter orifice was catheterized to pelvis of kidney for 28 cm. without meeting any obstruction. There was a free flow of hazy urine. Left ureter was catheterized to pelvis of kidney 30 cm. up, free flow of clear urine.

Indigo-carmin intravenously showed that the dye appeared from the right kidney in five minutes in 1+ concentration, from the left kidney the dye appeared in five minutes in much higher concentration, 3+.

Examination of the cystoscopic urine specimens showed that the bladder urine contained



FIG 2 "Lemon-shaped" pyelogram after injecting an additional 4 cc of opaque medium, upper ureter appears dilated and canalized

moderate number of w b c, free and clumped. Right kidney specimen showed occasional pus cast, moderate w b c, free and clumped, occasional r b c. Left kidney specimen showed occasional w b c and r b c and epithelial cells. Smears from the sediment of left kidney and bladder urines showed no bacteria and from the right kidney gram-positive cocci in groups. Cultures from the bladder and right kidney showed *Staphylococcus albus*, no growth from the left kidney after seventy-two hours.

Fearing a reaction, no pyelography was done at this time but a radiograph with the opaque catheters *in situ* was taken.

This was interpreted as showing that the right kidney was small and seemed to be pushed medially toward the spine, the kidney appeared to be surrounded by another larger rounded shadow which seemed to extend beyond the convex border and below the lower pole. I thought that this might be an encapsulated exudate. Against this diagnosis was the absence of temperature, which was now below 100 F, only slight tenderness but no bulging or redness in the flank.

The patient continued to improve. On January 3, 1938, there was very little tenderness in the right flank, temperature was normal, the

slightly distended. There was marked tenderness in right lower quadrant, there was no spasticity or rigidity. Left side of abdomen was soft. No abdominal masses were palpable. Vaginal examination was essentially negative.

Temperature on admission was 99.6 F, pulse 88 per minute. Urine was clear and contained no albumin or sugar and was negative microscopically. Blood count showed wbc 13,800, polymorphonuclears 76 per cent, lymphocytes 24 per cent. Blood pressure was 138/96. Sedimentation time at 18 mm, one hour and a half. Friedman test for pregnancy was negative.

An interstitial pregnancy was at first suspected but ruled out, a partial intestinal obstruction due to postoperative adhesions was also considered but ruled out. Ureteral calculus was considered and a urologic consultation was requested. I saw the case and made a notation that patient's symptoms may very well be explained on the basis of a right renal colic and suggested a cystoscopy. Simple x-ray of the genito-urinary tract showed marked gaseous distention interfering with the visualization of the kidneys, no calculi were noted. A routine cystoscopy and pyelography was done the next morning.

The bladder urine was clear, mucosa showed generalized congestion, ureteral orifices were in normal position and appeared normal. Right ureter was easily catheterized but an apparent obstruction was met about 20 cm up, no secretion was obtained from this side even after irrigation. Left ureter was catheterized to pelvis of kidney, no obstruction met with, and clear urine in drops obtained.

Five cc of indigo-carmin were injected intravenously, return in good concentration (4+) from the left side, first appearance in two and one-half minutes. There was no excretion of the dye from the right side.

Radiographic examination with the opaque catheters *in situ* revealed the following:

Right ureteral catheter reached to level of lower border of the fourth lumbar vertebra, that on the left to the lower border of the eleventh rib. The left kidney appeared to be well outlined, was normal in size and position, and no adventitious shadows were noted. The right kidney was not well defined.

Six cc of 15 per cent of hippuran were injected into the right ureter and the resulting pyelogram was abnormal, the pelvis appeared somewhat quadrilateral in shape with absence of calices, the upper ureter was not well outlined but appeared faintly curved and seemed to lie close to the spine. (Fig 1)

An additional 4 cc. of the opaque medium were injected into the right catheter and the pyelo-

gram now appeared "lemon-shaped," seeming to overlie the previous shadow, the ureteropelvic junction was dilated and the portion of ureter just below this seemed irregular and canalized. The rest of the ureter appeared normal. (Fig 2)

As the patient did not complain of any discomfort, an additional 2 cc of the opaque medium were injected into the right catheter and the pyelogram still had the same "lemon shaped" appearance, pointed at each end, and no calices, the upper ureter was very irregularly dilated and appeared frayed and segmented. (Fig 3)

Four cc of the 15 per cent hippuran were injected into the left ureter and the resulting pyelogram was bifid with an elongated upper calyx and some blunting of the calices. (Fig 3)

The next day the patient complained of severe pain in the right lumbar region and that she could not void. The abdomen was soft, however, and the bowels moved with an enema. She was catheterized and no urine was found in the bladder. It was evident that the patient was suffering from a postcystoscopic anuria. She was given 1,000 cc of 5 per cent glucose intravenously and a few hours later she began to void hemorrhagic urine. The temperature rose to 103.8 F. Extravasation of urine from the right upper ureter was suspected. The pain gradually subsided, there was no spasticity or rigidity, the abdomen remaining soft. There was no vomiting and the bowels continued to move daily with enemas. The patient took large quantities of fluids by mouth and excreted from 40 ounces to 60 ounces of fairly clear urine per day, the amount increasing from day to day. The temperature was remittent and gradually fell to lower levels, reaching 101 F in about a week. The blood count on December 19, 1937, was wbc 9,000, polymorphonuclears 84 per cent, monocytes 16 per cent. An indefinite mass was now palpable in the right abdomen, which was only slightly tender. There was no redness, swelling, or bulging in the right lumbar region.

The pyelograms could not be interpreted, although the picture of the upper ureter suggested an extravasation, but there may be a better explanation which I shall discuss later. The patient was kept under observation and she seemed to improve daily. At the end of a week she complained only of slight discomfort in the right lumbar region. The temperature was only slightly elevated and hovered around 100 F during the next week.

On December 28, two weeks after the cystoscopy, intravenous urography was done using 25 cc of hippuran. The urograms showed that the left kidney was functioning well and the pelvis



FIG 5 Compressed, flattened pyelogram in a case of abscess of lower pole of kidney [Urologic and Cutaneous Review 40 261 (1936)]



FIG 6 X-ray of right kidney just after removal. Infected cyst partly filled out with gauze at midportion and serous cyst at upper pole. Pelvis injected under pressure with 12 per cent Sodium Iodide

rum. The lower pole of the kidney was partially mobilized and a fluctuant, cystic mass, whitish in color, size of small orange, was seen, it was thought that it might be an encapsulated abscess of the lower pole. The wound was packed off and the mass aspirated, purulent fluid was withdrawn with a syringe, a suction needle was then introduced and about 7 ounces of purulent fluid, odorless, containing necrotic material, was removed. The sac was incised and a cup-shaped cavity which did not communicate with the pelvis was left in the midportion of the kidney, it was evident that we had incised an infected cyst. Further digital exploration revealed that there was another fluctuating mass at the upper pole. The pedicle was very short and it was with difficulty that the kidney was mobilized and brought into the wound, in doing so it came away from the pedicle, there was surprisingly little bleeding, clamps were put on the stump of the pedicle, the ureter was freed, clamped, tied, and cut, and the kidney removed. The pedicle was not tied but the clamps were left *in situ*. Wound was packed with gauze, and a rubber glove was put between the peritoneum and the packing. Wound closed, drains and clamps came out at upper angle of wound. Examination of the kidney specimen showed that the kidney contained an infected cyst at the mid-

portion and also a serous cyst at the upper pole. (Fig 6)

Patient was given 300 cc. of citrated blood. She made a good postoperative recovery voiding good quantities of urine. There was a rise in temperature during the first few days, no bleeding from the wound, clamps were removed on the fourth day and all the packing and glove drain were out by the eighth day. Wound healed by primary union, moderate amount of discharge from upper angle of wound.

The patient was kept in bed for three weeks. The remaining left kidney functioned well, the urinary output averaging more than 50 ounces per day and the blood urea N was 11.5. She was discharged from the hospital on February 2, 1938, about three and one-half weeks after her operation.

**Pathologic Report (Dr. A. Kantrowitz, Laboratory No 7366)**

*Gross*—Specimen consists of a right kidney, 14 by 7.5 by 6 cm. The anterior kidney surface is



FIG 3 Pyelogram after injecting an additional 2 cc of the opaque medium, upper ureter appears frayed and segmented



FIG 4 Right retrograde pyelogram showing compressed, flattened pelvis, wide shadow in right kidney area (Three weeks after Figs 1-3)

blood count was normal (wbc 6,100, polymorphonuclears 68 per cent, lymphocytes 32 per cent) Sedimentation test 20 mm in one hour

As the patient appeared quite well and no definite diagnosis had been made, I determined to do another cystoscopy and right pyelography. This was done on January 5, 1938, about three weeks after the original cystoscopy. The right ureter was easily catheterized—no obstruction met with, clear urine in drops was obtained. Urine showed only an occasional rbc and on culture *Staphylococcus albus*. Left ureter was not catheterized. Excretion of the indigo-carmin appeared in four minutes in fair concentration (2+) from the right side, there was good excretion of dye from the left side as seen through the cystoscope, the dye appearing in four minutes.

Right pyelography was done, injecting 6 cc of 15 per cent hippuran into the catheter (Fig 4). This pelvis appeared to be lying close to the spine, was long and narrow, with a quadrilateral-shaped upper calyx and a small minor calyx lying over the middle of the twelfth rib, the upper ureter was concave and seemed to fuse with the long narrow pelvis, ureter was intact along its entire course. There was the same broad shadow in the right kidney area with a well-defined lower

border and a globular shadow seemingly in contact with the convex border.

This pyelogram differing from the first one showed definitely that the pelvis was compressed by some mass and seemed to meet the urographic criteria for cyst as defined by Braasch<sup>10</sup> (a) abbreviation of the adjacent calices, (b) compression and flattening of the adjacent portion of the renal pelvis, (c) change in position and axis of the kidney.

But I obtained a similar compressed, flattened pyelogram a few years ago in a case of encapsulated abscess of the lower pole of the kidney<sup>11</sup> (Fig 5).

Neoplasm was ruled out. It was thought that the compression was caused either by an encapsulated exudate or a renal cyst at the lower pole of the kidney. Exudate was ruled out for the reasons stated above, i.e., absence of fever, normal blood count, normal sedimentation time, etc. I felt quite convinced now that the patient had a renal cyst.

Operation was decided upon and performed on January 7, 1938, under cyclopropane anesthesia. The right kidney was approached retroperitoneally through the usual oblique lumbar incision. No exudate was found in the perineph

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## EFFECTIVE STERILIZATION OF EATING UTENSILS

The extent to which disease germs are disseminated in public eating and drinking places, such as restaurants, lunch rooms, and beverage parlors," is a matter of public concern, notes the J.A.M.A. Numerous organisms, such as hemolytic streptococci, pneumococci, and diphtheria bacilli, have been discovered on tableware and hand washed dishes. A recent report<sup>1</sup> confirms the value of chlorine as a sterilizing agent.

A bacteriologic survey was made in the town of Peterboro, Ontario, of eighteen mostly small, public places in which food or beverages were dispensed. All but three had double metal sinks. All used towels for drying purposes. Bacteriologic specimens were obtained by rubbing sterile swabs at least three times over the entire area of spoons, forks, and tumblers that would come in contact with the user's mouth.

These specimens were taken after the noon or evening "rush" period after the utensils had been washed and made ready for use. Samples of wash and rinse water were taken by means of sterile pipets and placed in sterile vials. The temperature of the wash water varied from 95 to 140 F., that of the rinse water from 48 to 150 F.

On the assumption that a plate count of 100 is a reasonable maximum to be set for eating utensils, laboratory examinations showed that more than half of the restaurants were not properly sterilizing the utensils or satisfactorily cleaning them before sterilization. They disclosed the

presence of colon bacilli, diphtheroids, and streptococci in 90 per cent of the specimens. The total number of organisms ranged from ten to 35,000. The total number of bacteria in wash water was between 100 and 400,000, while that of rinse water was from two to 47,000.

A follow-up survey was made several months later after a chlorine concentration of one hundred parts per million had been proposed, double sinks installed where previously lacking, proper instructions given, and periodic checks made to determine whether the chlorine used in the rinse water was of sufficient strength.

The results were highly gratifying. After sterilization with chlorine solution the bacterial count per utensil was found, in all but one case, to be below one hundred and in many instances organisms, such as colon bacilli, were not detected either on utensils or in specimens of the rinsing water. Only four specimens of wash water and one of rinse water exceeded one thousand bacilli. Since the temperature range of the wash water and the rinse water was the same as in the preliminary survey, the whole credit for sterilization is given to chlorine, a simple and inexpensive sterilizing agent.

The report emphasizes that two sinks are essential for prophylaxis, that drying by hand towels has no place in any system of dishwashing in public places, and that the mere dipping of unwashed glasses in a chlorine solution without previous cleaning is insufficient, though frequently done in beverage rooms.

## Correspondence

## AMERICAN FIELD SERVICE IN FRANCE

Stephen Galatti, National Executive Chairman  
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Cortlandt 7-9024-25

Dr Peter Irving  
Medical Society of the State of New York  
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Dear Dr Irving,

We should like very much to obtain the interest and support of the Medical Society of the State of New York in the work which we are undertaking once more in France for the relief of the sick and wounded.

During the last war, our ambulances carried more than half a million wounded from the front lines to the dressing stations, and we are prepar-

ing to duplicate this alleviation of suffering wherever and whatever the need may be.

We are registered with the Department of State to raise funds for this purpose, our registration number being 94.

I hope very much that you may bring this to the consideration of your Society. In the meantime, if there is any further information you would like to have, I shall be only too ready to supply it.

Very sincerely yours,  
STEPHEN GALATTI

April 30 1940

The above will be considered by the Council at its meeting on Friday June 14, 1940—Peter Irving, Secretary



smooth. A few small punctate hemorrhages are noted when the kidney capsule is stripped. The kidney capsule strips with ease. The posterior surface contains two cystic masses intimately connected with the kidney, one at the upper pole, the other in the midportion. The upper pole cystic mass contains 110 cc of clear, straw-colored fluid. The wall is translucent. The midbody cyst contains a very much thickened wall showing an opaque appearance. The purulent contents had been removed at operation prior to the receipt of the organ by the laboratory. Grayish exudate is noted on the interior surface of the cyst. The midbody cyst, on cross section, is found to present a considerably thickened wall, measuring up to 0.5 cm in areas. The wall presents a hemorrhagic appearance. The upper pole cyst presents a smooth wall, measuring less than 0.1 cm. The pelvis is somewhat dilated in its upper portion. A few small submucosal hemorrhages are scattered throughout the pelvis. There is no communication between the pelvis and calices and either of the cysts.

*Microscopic*—The cyst wall shows hyaline and loose connective tissue. Both show many mononuclear cell collections. In the thick-walled cyst there are granulation tissue and necrotic masses adherent to the eroded lining. Exudate with polynuclear leukocytes is also noted. Bacterial stains reveal the presence of gram-positive cocci in clusters in the exudate.

The kidney cortex and medulla show considerable scarring with collections of mononuclear cells. Atrophy of the tubules and hyalinization of the glomeruli are frequently noted.

## Comment

This case presents many puzzling features that are difficult to explain. What brought on the pain in the right abdomen that caused the patient to seek medical advice? These cysts must have existed for a long time without any symptoms. Quinby and Bright<sup>11</sup> have shown, in an analysis of 32 reported cases of solitary cyst at the upper pole, that over half of these cases had pain in the right upper quadrant of the abdomen, but the cause of the pain is not explained.

It is reasonable to assume that this patient's initial symptoms were caused by some bleeding in the cyst located at the midportion of the kidney which later became infected. The route of infection is not clear. It might have been metastatic,

as the patient had a slight upper respiratory infection. On the other hand the cyst might have become infected by extension from the kidney, the *Staphylococcus albus* was found at one time in the urine from the right kidney and the same organism was found in the wall of the cyst.

That there was no direct communication between the pelvis and the infected cyst is shown also by the fact that the urine from the right kidney at the last cystoscopy was clear and the cyst contents were found at operation to be purulent.

It is difficult to correlate the first pyeloureterograms with the urograms obtained later. Herbst and Vynalek<sup>18</sup> have called attention to the pyelographic and other urographic changes produced by the "solitary" cyst. They describe a case of renal cyst in which the pelvis was oval shaped and all calices were obliterated. They stress the presence of the shadow of the cyst which should be looked for in the urogram. The globular shadow was present in our case in all the later films.

The peculiar appearance of the upper ureter (Figs 2 and 3) might be explained as a submucosal rupture with periureteral extravasation. If the theory of pyelolymphatic ingression expounded by P. A. Narath<sup>19</sup> in the report of his case of extrarenal extravasation is accepted, then the segmented appearance of the upper ureter, strongly resembling his case, might be explained as a lymphatic backflow.

Bilateral pyelography done routinely has its dangers. It was a grave technical error to inject both kidneys when only one was functioning. The result was a dangerous reaction with a temporary anuria and high fever.

The laboratory findings were quite confusing. Just previous to operation the blood count was normal and the sedimentation test normal, there was only a slight rise in temperature.

These normal findings in the presence of suppuration might now be explained on the theory that the infection in the cyst being well walled off, there was little toxic absorption into the general circulation.

gavage. The diagram will clarify these directions

It may be noted that the use of such a semistiff obturator enables one to continue to use gavage tubes which otherwise would have become too soft to be serviceable

Of course any type of flexible bougie of the proper diameter and length may

be used as an obturator We used a No 7 ureteral catheter merely because we had it on hand, and it served the purpose admirably

We trust other workers in this field may find this hint useful in eliminating the nerve-racking chore of trying to aspirate gastric juice from a practically dry stomach

105 East 29th Street

## OBSTETRICS OF FORMER DAYS

Dr Frank T Woodbury, of Wakefield Mass writes an interesting account, in the *New England Journal of Medicine*, of the practice of obstetrics forty years ago among the immigrant working people who came to his town

There was no birth control, no race suicide, he says Among certain groups was a belief brought from the home country, that if a woman did hard physical labor during her pregnancy, and particularly during the first stage of labor, the second stage would be easier and shorter And perhaps they were right

May I cite a case in point Labor began while the woman was digging potatoes in a nearby field When she could remain on her feet no longer she was carried to the house and placed in bed just as she had been picked up As usual, no physician had been engaged, but one was hastily summoned He arrived barely in time to witness the birth Recovery was uneventful."

Similar incidents with minor variations could be cited by the score, and all without casualties to mother or child

What did it mean? It had led to natural selection of child-bearing women for generations in the home country—Mother Nature can do a pretty good job if she does not have too much assistance or interference.

Furthermore it resulted in large families to

those best able to produce them I regret to add that the mothers of the next generations have not been so spontaneous or so productive, with seemingly far less resistance

Those early immigrants called physicians only because they had been told that it was "the law" in this country Only neighbors' wives attended the births "at home," but if a woman survived her first childbirth there was seldom any trouble in succeeding births The death rate among primiparas was not known as they were recorded only by the parish priest who attended the funeral The living births were recorded at christenings, but the stillbirths were not reported at all, and the causes of death were recorded only when the priest made the diagnosis and saw fit.

As there are but a few of us left who were active among those people in that period, I have felt that the history of that ten or fifteen years should be recorded

Being a young man, recently out of college, I was able to learn and speak the necessary part of their language and so was much in demand Incidentally I was delighted to get ten dollars and satisfied with five dollars and often received only the twenty-five cents for the birth return—perhaps it was all the service was worth in comparison with the time and care of the modern obstetric case.

## SULFANILAMIDE AND SULFAPYRIDINE SALE LIMIT

The State Board of Pharmacy announces the promulgation of a new rule which restricts the retail sale of sulfanilamide and sulfapyridine It provides

No preparation of sulfanilamide or sulfapyridine, their derivatives, or mixtures containing sulfanilamide or sulfapyridine shall be sold at retail for human consumption except upon the written prescription of a physician The prescription shall remain on file in the pharmacy where compounded Such prescription shall not be refilled if it bears indication by the physician that it is not to be refilled "

Physicians in practice in New York City are invited to register for practical clinical courses of observation in venereal diseases, to be given under the auspices of the Bureau of Social Hygiene of the New York City Health Department. Sessions will start on June 10 in the central clinic of the Health Department Building 125 Worth Street

Six sessions will be devoted to syphilis and six sessions to gonorrhea Each series of six meetings will be limited to six physicians The

Physicians are charged with the responsibility of specifying on the prescription whether it is refillable in order to control continued self-medication.

This is the second rule which the board has established in the interests of protecting the public health against the potential danger occasioned by widespread self-treatment with drugs. The first, published in the January 22 1940 issue of *Health News* places similar restrictions on the retail sale of hypnotic or somnifacient drugs—*Health News*, March 18, 1940

syphilis clinics will be held three mornings a week and the gonorrhea clinics three afternoons a week, on Monday, Wednesday, and Friday

Emphasis will be placed exclusively on practical clinical matters, there will be no lectures, no certificates will be awarded The sole purpose of these sessions is to give the physician in practice an opportunity for first-hand knowledge of modern diagnosis and treatment of venereal diseases

# RAPID METHOD FOR CHECKING POSITION OF THE TUBE DURING GASTRIC GAVAGE

EMANUEL MESSINGER, M D , Brooklyn, New York

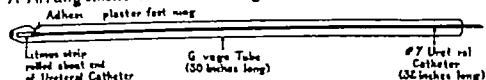
**I**N CARRYING out the procedure of gastric gavage during Sakel's insulin treatment of schizophrenia, it is imperative for the physician to be absolutely certain that the end of the gavage tube is in the stomach before administering any sugar. Sakel has adequately emphasized the dangers of asphyxia and aspiration pneumonia whenever proper precautions are neglected. He has wisely insisted that the only sure test of the intragastric position of the tube is the obtaining by suction of a secretion that will turn blue litmus red.

Sakel has introduced and popularized the use of glass genitourinary aspirating syringes for making this "acid" test. In the great majority of cases this method of obtaining gastric juice is entirely satisfactory. However, in any large group of cases one invariably encounters a few in whom the obtaining of gastric juice by this method is inordinately difficult and tedious. Such patients either do not secrete the usual increased amount of gastric juice, or their stomachs are unusually dry because they do not take any fluids except as are

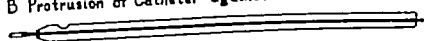
given them by forced tube feedings. In working with such cases, one may have to try aspirating for fifteen minutes or longer at various levels, without obtaining the desired "acid" evidence that one is actually in the stomach. The disadvantages of such a delay when one is anxious to terminate that particular hypoglycemic coma in a hurry, or when at the same time one is concerned about numerous other patients who may require emergency attention, are too obvious to need elaboration. In the hypoglycemic treatment unit at the U S Veterans Facility, Northport, New York, we have evolved the following technique which obviates these difficulties.

A No 7 French (or larger) semistiff fabric ureteral catheter is prepared by rolling a piece of blue litmus paper snugly around its tip and securing the same firmly with a thin strip of adhesive plaster. The catheter is then threaded, in obturator fashion, through the length of the ordinary No 20 French rubber gavage tube. The catheter should be about two inches longer than the gavage tube. The latter with its "catheter-obturator" inside of it is then passed in the usual manner into the stomach. When we feel reasonably certain that we have passed the cardiac sphincter, the catheter is pushed in an additional inch or two so that the litmus-bearing tip will project beyond the end of the gavage tube for a corresponding distance. The catheter is then rotated once or twice so that the litmus will come in contact with the gastric mucosa. The catheter is then withdrawn and the litmus-bearing tip inspected. If the confirmatory acid reaction is evident, we then inject some air with the G U syringe to assure ourselves again that no obstruction is present, and then proceed immediately with the

A Arrangement of tubes during insertion



B Protrusion of Catheter against Gastric Mucosa



Article No. 25 Research Unit for the Study of the Influence of Heterophile Antigen in Nervous and Mental Disease. Veterans Administration Facility, Northport Long Island, New York.  
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# LET US WASSERMANNIZE THE EXPECTANT FATHER

MELVYN BERLIND, M D , C M , Brooklyn, New York

IT HAS become legally compulsory for the physician in New York State (as well as in twenty-five other states by the enactment of similar laws) to take a Wassermann test on the expectant mother. The law, incidentally, states that the Wassermann test (or any other test for syphilis, such as the Kahn, Sachs-Georgi, Meinicke, etc.) is to be taken not necessarily at the first examination of the patient but at the first complete examination. This is a mistake, because a not inconsiderable percentage of patients, especially in clinics, are seen once or twice prenatally and not again until labor sets in. Thus, a positive Wassermann, late in pregnancy, precludes sufficiently intensive treatment. The law should state definitely that the blood test must be taken at the first examination.

Another bill, contributing to the elimination of this dreaded scourge, is the Prenuptial Syphilis Law, requiring blood tests to be taken of the bride and groom before marriage and a marriage license to be granted only to those who are free of syphilis.

The passage of these laws shows the sanity and farsightedness of our legislature and promises to a considerable extent to be an important factor in the eventual disappearance of congenital syphilis.

Excellent as these two laws might be, they do not go far enough. As is well

known, a negative Wassermann test during pregnancy does not rule out syphilis, in fact it is more apt to occur in the pregnant woman with syphilis than in others. Thus, a syphilitic child may be delivered from an apparently healthy woman with a negative Wassermann. It has been suggested by Engman that in these cases the woman is a spirochete carrier and is the victim of an attenuated syphilitic infection as the result of fairly extensive though not sufficient treatment of the husband.

During recent months there has come to my attention the delivery of 3 definitely syphilitic children from mothers with negative Wassermanns. All 3 husbands gave positive blood tests, but these tests were made subsequent to the delivery of the syphilitic infants.

It is with these cases in mind, and there must be many more, that the author makes a plea to the medical profession to take a routine Wassermann test on the expectant father. Should the mother be negative and the father positive, routine antisyphilitic treatment must be given to the mother to assure a healthy child. Often, after one or two provocative injections of neosalvarsan, the test becomes positive. It is only in this way that we will be able to eliminate syphilitic children from being born to women with negative blood tests.

55 Eastern Parkway

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## AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY INC

The Forty-Sixth Annual Meeting of the American Laryngological, Rhinological and Otolological Society, Inc., will be held in New

York City at the Waldorf-Astoria Hotel on June 6, 7, 8, 1940. An interesting program will be presented.

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## AMERICAN HEART ASSOCIATION

The Sixteenth Scientific Sessions of the American Heart Association will be held in

New York City at the Hotel Roosevelt on June 7 and 8, 1940.

# A NEW SKIN THERMOMETER

SAUL S. SAMUELS, M.D., New York City

**T**HERE are times when an accurate and reliable skin thermometer is required in the study of peripheral vascular diseases. Heretofore there have been two main types available. A mercury thermometer with a flattened bulb has proved to be unsatisfactory because the glass of the bulb is so delicate that it flexes with variations in pressure of the thermometer upon the skin. In other words, a slight increase of pressure causes an artificial rise in the mercury column and vice versa. The other available type of thermometer is the electrical apparatus based upon the use of a thermocouple. The objection to this type is the necessity of complicated calculation entailed in each temperature determination.

The Dermalor is an entirely new apparatus which has the advantage of simplicity of operation and of direct temperature reading both in Fahrenheit and centigrade. The operation of this instrument is on the principle of the

Wheatstone bridge and is calibrated to read directly, in degrees, the variation and resistance of the applicator due to temperature changes. The percentage of accuracy of this instrument is 2 per cent over the entire scale. In the operation of the instrument, the first step is to test the strength of the small battery which is part of the apparatus. This is done by turning a snap switch to the proper stop and turning the small rheostat further in order to obtain the proper reading. In other words, this maneuver serves as a check on the strength of the battery. After the battery is tested, the switch is turned to the next button, and the uncovered applicator is applied to that portion of the skin from which a reading is desired. The needle will register the temperature, in either Fahrenheit or centigrade, directly on the scale.

For quick and accurate temperature determinations this apparatus has proved to be entirely satisfactory.

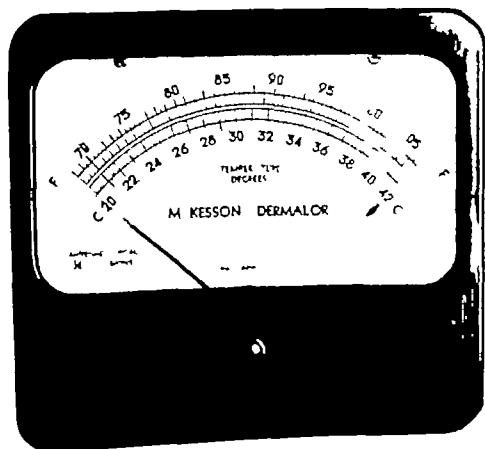


FIG 1 Simplified scale

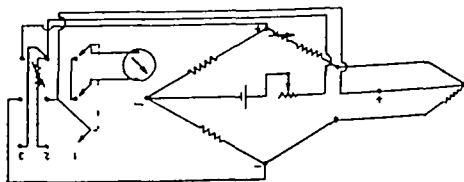


FIG 2 Diagram of electrical construction of apparatus

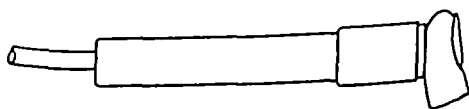


FIG 3 Method of applying applicator to skin

## STIFF COMPETITION

Several years ago Mr. Schneider and Duncan G. Smith were partners in a confectionery store on Broadway, but later the dead man opened

his own business on Main Street.—Seen by H. D. in the *Irrington (New York) Gazette* and published in *J.A.M.A.*

It may be said that no difficulty has been found in obtaining the cooperation of the obstetrical services

Finally, some means of secretarial service must be provided. An enormous amount of checking and rechecking must be done to assure worth-while results. Generally there is little money available from the county society, and one must turn to private sources for finances. In New York the Maternity Center Association has felt that such a study falls into line with its field and has assigned us help from its offices. This has solved our secretarial problem. In a smaller community such work might well be done by volunteer workers.

It must now be determined just what is to be studied. After extended consideration it was decided to include both stillborn infants and neonatal deaths. In other cities these two classes of mortalities have been studied by separate committees. The definition of a stillborn infant differs greatly in various localities. In New York City if a baby dies which has made any attempt to breathe, or to move, or in which the heart beats, this is considered a neonatal death, and both a birth and death certificate must be filed regardless of the term of gestation. The committee did not wish to study infants in which there was very little chance of survival, and certain limitations were set up. These were the term of gestation in weeks and the weight. In some cases the former is not known. In brief, if the term of gestation is twenty-eight completed weeks, we accept the case for study. If such term is not stated and the baby weighs 1,000 grams or more, it is included. It is realized that some babies not fulfilling these qualifications might fall properly into the scope of the study, but they are few in number. When no data are available concerning either the baby or its mother the case is excluded, such are the abandoned babies and cases of homicide in which babies are found without any identification. Judged by the standards enumerated, we have in New York County from 110 to 120 cases each month. Only those babies dying within the first ten days of life are considered in the neonatal death group.

For the actual collection of statistics a questionnaire has been worked out (Fig

1) It consists of two pages and is designed to be filled out as mechanically as possible. Whenever possible, checking or circling has been employed. In other instances, opinions are requested, and space is left for details. At the left margin is a box for coding. Much assistance in the preparation of the questionnaire has been obtained from the work of the various groups in Chicago, Philadelphia, and elsewhere. The form is divided into five general subheads: the past medical and obstetrical history of the mother, the results of previous pregnancies, the history of the present pregnancy, the present delivery, and the condition and care of the infant. Under these headings are questions designed to give all the essential information that will help in evaluating the mortality. With the aid of statisticians from the Health Department, the questionnaire has been prepared for accurate statistical studies, as all variations of information—or the lack of it—are provided for. The final form has been evolved after many changes and after having been in use for over a year. At present, no further changes are contemplated. It is suggested that in any similar study a limited number of questionnaires be provided, as each locality may well have its own problems necessitating modifications later on.

The chief objection to be found to this type of questionnaire is that it is laborious to fill out. It may, of course, be shortened, but by doing so essential information will be lost. Practically, most such objections are voiced at the beginning of the study. It soon becomes an accustomed duty, and physicians realize the importance of their cooperation. If the information is requested shortly after the death occurs when the facts are fresh in the attendant's mind, much less difficulty is encountered. By having all information from the birth and death certificates included by the secretarial staff before the questionnaire is sent to the attending physician or hospital, the work of the latter is greatly simplified. In New York City a confidential certificate—on the back of the regular certificate—is a legal requirement of the Board of Health, and information is allowed our committee from this source.

Once provisions have been set up to carry on the study, its actual working

# Special Article

## A METHOD OF STUDYING INFANT MORTALITY

LOCKE L. MACKENZIE, M D, New York City

*(From the Work of the Special Committee on Infant Mortality of the Medical Society of the County of New York)*

**D**URING recent years great emphasis has been placed both in medical and lay circles on maternal and infant mortality, and it has rightly been felt that here lies a wide field for preventive work. The Medical Society of the County of New York created a Special Committee to consider problems of infant mortality. As the work of this committee has progressed, a large number of problems have been met and solved, and in view of the value to others, the method of study is presented herewith in the hope that other communities might be aided in similar projects. The scope of this work in a large city such as New York City probably embraces most of the difficulties that would be found in other localities.

As the Special Committee on Infant Mortality evolved originally from a Maternal Welfare Committee, its members were in large measure obstetricians. In fact, the aim of its work was to attempt to clarify the causes—and, therefore, reduce the incidence—of babies dying as a result of obstetrical procedures. A very large percentage of all babies dying in the first year of life die before they are ten days old. Most of those dying at a later date die from nonobstetrical causes—acute infections, accidents, or malnutrition. Prematurity alone remains as a material factor in the later neonatal deaths, and even here the majority die within a few days of birth.

Preliminary to any such work, certain groundwork must be laid. It is well that a study of this type be conducted under the aegis of organized medicine, because, in dealing with official departments, hospitals, and physicians, a committee organized with the official approval of the county society will have less trouble in functioning and in obtaining cooperation.

It is most important that the help of

the Health Department be enlisted, in order to obtain the names of the babies who die, as well as the place and time of death. In a large city the Bureau of Vital Statistics handles such data, while in smaller communities no such separate division may exist. In New York City we have been especially fortunate because our Department of Health has not only done all that we have asked but has taken an active interest in the work, furthering it to the extent of providing material, statistical data, and actual participation by its personnel.

In communities where municipal hospitals exist or where hospitals are under the direction of a department of hospitals, numerous questions arise necessitating the cooperation of this organization. Permission must be granted for the use of the hospital records for scientific study. Autopsy permits on unclaimed babies and the facilitation of autopsies on babies to be disposed of by the city are only a few of the many questions encountered. In New York we have received the enthusiastic help of this department.

After official approval has been obtained, it is imperative to discuss the problem with the directors of the various obstetrical services in the area where the survey is to be conducted. In this manner many excellent suggestions are received which make unnecessary a great deal of revision. The method used in our study was to list all hospitals doing obstetrical work and, after acquainting the chiefs of service with the intended study, to ask each of them to appoint a so-called "hospital representative." It was found best to ask that this representative be one of the junior members of the attending staff, rather than an intern or record-room clerk. The latter lacks a medical background, while the former rotates frequently on and off service.

## 19-32 PRESENT DELIVERY

- 19 Circle whether membranes ruptured artificially, spontaneously
- 20 Time of rupture Hours prior to the onset of labor delivery , Hours prior to actual delivery
- 21 What was the duration of the 2nd stage of labor?
- 21a State presentation and position
- 22 Was an oxytocic administered before baby was born? If so, specify substance, dosage, and times of administration
- 22a. Was such oxytocic a contributory factor in causing infant death, in attendant's opinion?
- 23 Was an analgesic used? If so specify dosage, times of administration and method of administration
- 23a. Was such analgesic a contributory factor in causing infant death, in attendant's opinion?
24. Was an anaesthetic used? If so, specify dosage, times of administration and method of administration
- 24a. Was such anaesthetic a contributory factor in causing infant death in attendant's opinion?
- 25 At what intervals during the 2nd stage of labor was the fetal heart observed?
- 26 If forceps were applied, was traction hard? How many applications?
- 27 Was more than one type of operation attempted? If so, specify
- 28 Circle whether abnormal bleeding in 1st or 2nd stage from placental site, cervix, vagina, external genitalia, none, unknown or not stated
- 29 Were there any abnormalities of placenta cord, or liquor amni? If so describe
- 30 Were there any intrapartum evidences of infection? If so specify
- 31 Did mother run a septic course? 32 Did mother survive?
- 33-43 CONDITION AND CARE OF INFANT
- 33 If born elsewhere and brought to hospital, age on admission Weight  
Condition on admission
34. Were any birth injuries noted at time of delivery? At any later time?  
If so, describe
- 35 Were any congenital defects noted at time of delivery? At any later time?  
If so, describe
- 36 Was there asphyxia? Was the baby aspirated?
- 37 Were any drugs employed for resuscitation? If so, specify drug and how administered
- 38 Was any special care provided? If so, specify
- 39 Circle whether feedings were breast milk alone formula alone, breast milk with supplementary formula
- 40 What were the clinical causes of death?
- 41 Circle whether no autopsy, gross autopsy only gross and microscopic autopsy
- 42 Who performed autopsy?
- 43 What were the pathological diagnoses?



**FIG 1 THE MEDICAL SOCIETY OF THE COUNTY OF NEW YORK, BOROUGH OF MANHATTAN, COMMITTEE ON INFANT MORTALITY, Room 506, 654 Madison Avenue, New York City**

*This questionnaire does not require the repetition of information already submitted on birth, stillbirth, and death certificates*

*Back of form may be used for any additional remarks and summary of case, if desired*

- |    |                                      |                         |                           |
|----|--------------------------------------|-------------------------|---------------------------|
| 1  | (a) Year of death                    | (b) Certificate numbers | Stillbirth certificate no |
|    |                                      | Birth certificate no    | Death certificate no      |
| 2  | If death in hospital, circle whether | private patient,        | general service patient.  |
| 2a | Was consultation held?               | Previous to delivery?   | After delivery?           |
- 3-6 PAST MEDICAL AND OBSTETRICAL HISTORY OF MOTHER**
- 3 Circle whether mother has had frequent sore throat, tonsillitis, tuberculosis, rheumatic heart disease, rheumatic fever, nephritis, hypertension, scarlet fever, none of the above, unknown or not stated
- 4 Circle whether mother has had abdominal operation, pelvic operation, none, unknown or not stated
- 5 Circle whether mother has diabetes, hyperthyroidism, hypothyroidism, any other endocrine or metabolic abnormality, none, unknown or not stated
- 6 (OMIT IF PRIMIGRAVIDA) Circle whether mother has had PREVIOUS history of toxemia, placenta previa, premature separation of placenta, Cesarean section, forceps delivery, breech extraction, difficult delivery, none, unknown or not stated

**7-10 RESULTS OF PREVIOUS PREGNANCIES**

- 7 Total previous pregnancies
- 8 Previous born dead, total  
(a) under 28 wks , (b) 28-37 wks , (c) 38 wks and over
- 9 Previous born alive, total  
(a) under 28 wks , (b) 28-37 wks , (c) 38 wks and over
- 10 Previous born alive, died during 1st 10 days  
(a) under 28 wks , (b) 28-37 wks , (c) 38 wks and over  
(Enter "unk" in each space for which information is unknown)

**11-18 HISTORY OF PRESENT PREGNANCY**

- 11 In what month of pregnancy was patient first seen?
- 12 Circle grade of prenatal care in accordance with standards outlined below Grade A, Grade B None, Unknown.  
Grade A—Prenatal care of Grade A shall include the following  
(1) A careful history (6) Visits to a physician at least once a month until the sixth month, then oftener as indicated, with blood pressure, urinalysis, and body weight at every visit, and abdominal examinations during the last 2 months at least  
(2) A complete physical examination  
(3) Pelvic measurements  
(4) Serological test for syphilis, with treatment if positive  
(5) Instruction in the hygiene of pregnancy  
Grade B—Some prenatal care but not up to the standard of Grade A in one or more respects
- 13 Circle whether any of the following complications were present  
(a) Hyperemesis, (b) Convulsions, (c) Fibroids or other genital organ tumors,  
(d) Albuminuria, began at what month? Highest blood pressure /  
(e) Hypertension, began at what month? From what cause?  
(f) Antepartum bleeding, in what trimester?  
(g) None of the above, (h) Unknown or not stated
- 14 Did mother have any other acute or chronic intercurrent illness or accident?  
If so, specify
- 15 If any evidence of syphilis state kind of treatment given when started and whether continuous
- 16 Was pelvis X-rayed? Was pelvis ample? Type
- 17 If not X-rayed, was pelvis clinically ample for this infant?
- 18 Was an external version done at any time? If so, at what month?

The eventual importance of the type of statistics gathered by this method of study can hardly be overemphasized. Here are available complete correlations between almost any phase of the maternal history and fetal mortality. By the use of the statistical analyzing machines extremely complex situations may be clarified. To give but a few examples: It is possible to study the influence of external version in the eighth month, on possible separation of the placenta or asphyxia due to strangulation by the cord, one may evaluate clinical versus x-ray pelvimetry in its relation to dystocia, or it is possible to contrast the different grades of prenatal care and prematurity. The combinations and possibilities of study are almost limitless. The questionnaire may be used equally well as a control on a group of infants who do not die, and we may

be able to judge the effect, for instance, of various analgesics or oxytocics on fetal mortality. Such control series have been collected in this study.

As the statistics are gathered it is hoped to present a series of studies along various lines that may result in clarifying the major causes of infant mortality. If this can be done, suggestions to reduce the mortality rate will surely follow. It is greatly to be hoped that this type of study will be started in as many localities as possible. The method used in New York County is but one of many, and it has been detailed in the hope both that it may spare other groups starting such surveys some of the difficulties of organization, and also that it may provide one way of obtaining information of the greatest value to preventive medicine.

#### A WELL-DESERVED BOUQUET

The presidency of the modern, hyperactive state medical society long since has ceased to be just an honor, it has come to be a job and a man-sized job at that.

The demands made on the time of that official are ever increasing and we often wonder, says the *Journal of the Indiana State Medical Association*, just how one manages to give the time required. For a good many years past the "head man" in our own association has done a good job of it, he has traveled over the state, as well as into other states, he has been a student of medical conditions, locally and nationally. This also is true of the heads of many sister associations.

Without seeming to be "choosy," we cannot refrain from a comment on the work of Terry M. Townsend, a New Albany boy who formerly served as the head of the Medical Society of the State of New York. He traveled extensively about the state, addressing both medical and lay audiences, and his talks were so well regarded by the Public Relations Bureau of that society that

they were printed in the weekly bulletin of that committee.

Dr. Townsend is an able speaker and has a wide knowledge of medical problems. One of his greatest admirers is our own Dr. William Niles Wishard, whom we reverently term "The Grand Old Man of Indiana Medicine." Dr. Wishard refers to Dr. Townsend as "one of my boys," and being one of Doctor Wishard's "boys" means a lot to those of us who have acquired the title. (Just how we acquired the title we do not know, but we have been thus classed for a good many years.)

Dr. Townsend located in New York soon after his graduation in medicine, being associated with the late Dr. Valentine, a urologist of much note in those days. Later, he came west to spend a year with Dr. Wishard, as a student and assistant. In 1934, on the occasion of the dinner tendered Dr. Wishard, feting his sixtieth year as a physician, Dr. Townsend was one of the principal speakers.

#### MEDICAL LIBRARY ASSOCIATION

The forty-second annual meeting of the Medical Library Association will be held at the University of Oregon Medical School, Portland, June 25-27, under the presidency of Col. Harold W. Jones of the Army Medical Library, Washington, D. C. Hotel headquarters will be at the Heathman. The program will include talks on the literature of epidemiology of plague, tularemia, and Rocky Mountain spotted fever; a symposium on investigations in local medical history and problems in bibliography based on a study of terminology in the field of nutrition

#### OPPORTUNITY LOST

There is too great a tendency to observe the early lesion in tuberculosis until progression has actually occurred, in which case the maximum opportunity for cure is lost. The purpose of treatment is not only to arrest the peripheral extension of the lesion, but also to arrest the process of central caseation. Otherwise, even though temporary arrest may occur later, the central caseous residue constitutes a menace in future years.—J. Burns Amberson, Jr., M.D., *American Student Health Association, December 1939*

modus operandi is almost automatic. The method used is as follows: every week the Department of Health, by means of its statistical analyzing machines, strikes off a list of those cases coming within the confines of our study. The original certificates—stillbirth, or birth and death as the case may be—are pulled out and photostated. These photostats are then sent to the Maternity Center Association. Here a file is kept noting that the death has occurred. A questionnaire is now sent to the hospital representative with a small attached card giving the name, address, and date of the mortality, along with a self-addressed and stamped envelope. If the death occurs in a home, then the letter is mailed to the attending physician's office. A notation in the files shows that the questionnaire has been sent. At first the photostated certificates were included with the questionnaire, but, as the return was not one hundred per cent, this practice was discontinued and they are now kept on file. In the hospitals the representative is responsible for the filling out of the requested information, actually, such duty is usually delegated to the resident obstetrician or the obstetrical intern.

The information is now sent back to the Maternity Center Association where a notation in the file indicates its return. The members of the committee receive the filled out questionnaires, taking turns for a month at a time. Unusual cases or instances illustrating subjects under discussion are held out for further conference.

The questionnaires are eventually returned to the Health Department. Here one of the committee members codes the answers. In order to make the coding uniform, all questions calling for a conclusion are coded only by one individual who does this work permanently. Questions that can be coded automatically are handled by nonmedical assistants. A word is in order about the code itself. It was necessary to adjust it to a card that could be punched. While no very great difficulty was encountered in coding the answers to the clinical questions, it proved very troublesome to code all the possible causes of death, especially as multiple causes are frequent. After a great deal of work it was found possible to code all possible causes of death to in-

clude six different diagnoses. To return to the procedure, after the questionnaire has been coded, cards are punched in duplicate by operators. The cards are now kept on file by the Health Department.

Probably the most important reason for such a study as this is an educational one. In order to promote this phase, each month a meeting of the Mortality Analysis Group is held at the county society's rooms. Here the committee meets with the hospital representatives and guests in order to discuss the mortalities. These gatherings are open to all members of the society who may be interested in attending. In a city such as New York it would obviously be impossible to take up each case in detail, so various types of meetings have been conducted. At some, interesting cases are brought up by the member of the committee who has reviewed the mortalities for the month. Again, the hospital representatives—more familiar with the details—discuss the case. At times, a meeting has been devoted to one type of infant mortality—asphyxia, cerebral hemorrhage, prematurity, etc. Of late we have invited a speaker to discuss some particular phase of the subject in which he has been interested, and we have illustrated his talk with the discussion of actual cases occurring during the month. The individual preference of the group as well as the size of the material at hand will, in large measure, determine what method is best to employ. The attendance at these analysis meetings has grown as time goes on, and it is the feeling of the members that they receive valuable information from them. Discussion is free and often will center on some controversial subject such as analgesia, oxytoxics, anesthesia, etc. At no time is the name of the hospital, patient, or doctor mentioned. The attending physician is notified in advance that his case will be discussed, and he is urged to be present. In general, men seem to welcome the opportunity and frequently identify themselves with the case. Unlike some of the work that has been done elsewhere, no vote on preventability is taken, as it is felt that this is extremely difficult to allocate and is of secondary importance to the educational features.

# Maternal Welfare

## Instructions to Prenatal Patients

It must be recognized that the prenatal patient in seeking care, presents her physician with the responsibility of giving her specific instructions as to her conduct during pregnancy. Individual physicians will naturally vary to a certain degree in their instructions. However, there are certain basic principles that should be covered

### Prenatal Visits

Patients should be given definite appointments for prenatal visits and instructed to bring a specimen of urine at each visit. A sample of a 24-hour specimen is preferred during the last trimester.

### Activity

Exercise is important to the prenatal patient. She should be instructed to walk at least one mile per day, providing she does not become fatigued. She should be warned against too much "shopping." Strenuous exercise should be forbidden, especially the more active sports, such as tennis, golf, skating, skiing, swimming, horseback riding, bowling, and the like. She should be warned that many abortions occur at the time that would correspond to menstrual periods. These intervals should be determined and the patient instructed to be especially careful not to be overactive at that time. Traveling should be restricted—in general fifty-mile automobile trips per day should be the maximum. It is best that patients do not drive during the last trimester.

Sufficient rest is necessary. A definite time for retiring is important so that patients may rest nine or ten hours each night. A rest period of one hour in the early afternoon is also desirable. Social life should be reasonably restricted.

Costus is preferably restricted during the first trimester, permissible during the middle trimester, excepting intervals that would correspond to the menstrual periods and absolutely forbidden during the last trimester. Tub baths should be eliminated during the last trimester. No douches should be taken unless directed by the physician.

### Clothing

Flat-heeled shoes should be recommended—the ordinary "Cuban" heel is suggested. Round garters are to be avoided. Maternity corsets are a matter of individual preference, but the physician should have the direction of the type of abdominal support worn. Clothing in general

should be comfortable, the shoulders should primarily provide support, and warning should be given against attempting to conceal the abdominal protuberance by tight garments.

### Nicotine and Alcohol

It must be recognized that modern living necessitates specific instructions about smoking and drinking. Nicotine and alcohol are transmitted to the fetal circulation. Smoking is perhaps best eliminated. There is more or less general agreement that more than four cigarettes per day may be harmful. It should be remembered that beverages high in caffeine content may produce damaging effects.

### Mental Attitude

Patients should be informed that pregnancy and labor are natural processes and carry a minimum risk providing the expectant mother is willing to govern her mode of living by necessary restrictions requisite to proper prenatal care. It should be recognized that the emotions may be exaggerated during pregnancy and proper attention given to this fact. It is important, especially with primiparae, to mention the absurdities of "old wives tales" as well as the conversational indiscretions concerning pregnancy which are so often the subject of discussion around the bridge table or over the back fence. If there are any questions concerning pregnancy they should be answered by the physician.

### Onset of Labor

Patients should be informed as to the manner of the onset of labor. Primiparae should receive special attention and be informed as to the character of the onset of pains, significance of "show," and the possibility of premature rupture of membranes.

### Availability of Physician

The patient should be informed as to how the physician may be reached at all times. She should be encouraged to consult the physician concerning any problem that pertains to her pregnancy. When patients are to be hospitalized, proper instructions about this phase should be given.

### Significant Signs and Symptoms

A list of significant signs and symptoms should be given to the patient with instructions to call

## Workmen's Compensation

**T**HE following amendments to the Workmen's Compensation Law have been made by action of the recent Legislature. Physicians are requested to familiarize themselves with these changes and to note the date on which they go into effect.

### C-4 and Progress Reports

Subdivision 4 of Section 13-a has been amended so that it will be necessary after July 1, 1940, for physicians to file their C-4 reports within fifteen (15) days after the preliminary C-104 report, instead of within twenty (20) days as heretofore. The same bill requires a physician, if requested, to submit *progress reports* at intervals of not less than three (3) weeks apart, *or at less frequent intervals if requested*, on forms to be prescribed by the Industrial Commissioner. *Request for progress reports must be made in writing to the attending physician by the Industrial Commissioner, the Industrial Board, the employer, or the insurance carrier.*

### Payment in No-Insurance Cases

After July 1, 1940, the Industrial Board is given the power to make an award for the value of medical services or treatment rendered to injured employees in claims where the employer has *failed* to take out compensation insurance. This applies of course to all employers who are not self-insurers. The fees shall be in accordance with the schedule of fees and charges prepared and established under the present Workmen's Compensation Law. The award shall be made to the physician or hospital entitled thereto, and a default in the payment of such award may be enforced in a manner provided for the enforcement of compensation awards as set forth in Section 28. (A certified copy of the decision of the Board, filed with the county clerk of the county in which the injury occurred or in which the employer has his principal place of business, may be entered in the Supreme Court and is equivalent to a judgment of the Court.) In the making of awards by the Industrial Board in noninsured cases, the claim of the physician or hospital for medical or surgical service or treatment shall be subordinate to the claim of the claimant or his beneficiaries—that is, compensation for time lost.

Another change in the law, which goes into effect on July 1, 1940, is that transferring the power to fix the fee for a physician's attendance at a hearing to the *Industrial Board*. Heretofore, the power to fix the fee was in the hands of the Industrial Commissioner. As soon as the Board assumes this function, rules and regulations will be set up by the Industrial Board and will take the place of Rule 21.

DAVID J. KALISKI, M.D. *Director*

# Maternal Welfare

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The patient should be informed as to how the physician may be reached at all times. She should be encouraged to consult the physician concerning any problem that pertains to her pregnancy. When patients are to be hospitalized proper instructions about this phase should be given.

### Significant Signs and Symptoms

A list of significant signs and symptoms should be given to the patient with instructions to call

the physician if they occur. Such signs should include vaginal bleeding, persistent headaches, edema of face and extremities, and diminution of urinary output. This list should cover the ordinary complications of pregnancy.

### Diet and Therapy

These subjects will be covered in a separate article.

### Instructions

It is most important that the patient's instructions be presented in written or printed form, otherwise important details are sure to be neglected or forgotten. A printed list of instructions is a constant reminder to the patient.

*Physicians can expect proper cooperation from the prenatal patient only if they assume absolute control of the conduct of the patient during pregnancy. We must be definite with instructions. Assumption has caused many serious errors.*

### THE FAMILY DOCTOR'S PLACE SECURE

"I take off my hat to the good general practitioner," said a famous specialist the other day. Dr. Terry M. Townsend, well-known urologist and president, at that time, of the State Medical Society, was addressing the Kiwanis Club, New York City, on April 17 on the subject, "Who is Your Doctor?" In the various branches of medicine," he said, "first comes the general practitioner," and "nine times out of ten he is the man you want." Dr. Townsend continued: "We are told that he is losing ground, that he was all right for the horse and buggy days, but that now everybody ought to have a specialist. Now I can speak on this subject with some right to be believed, for I am a specialist myself. But I take off my hat to the good general practitioner. Upon him, I truly believe, depends the health of the race. At least 85 per cent of the ills of the sick do not call for any skill not possessed by his well-rounded experience. He is thinking in terms of all parts of the body, of the patient as a unit, not as an envelope in which are housed the various organs which pertain to his particular specialty. *When a specialist is called, the proper place for him is as adviser and assistant to the general practitioner.* The specialist gives the general practitioner the benefit of special knowledge and skill in instances where either diagnosis is not fully determined or method of treatment is in doubt. As a rule, it is not to the advantage of the patient that the specialist should replace the private practitioner in the management of a case, for the specialist's knowledge of the patient, the history of the ailment, the entire background of the family problem, is too little wholly to supplant the physician in charge. Of course, if surgery is needed, the surgeon performs the operation, and is responsible for the after-care, but as to whether an operation is required at all and when it should be done, the family doctor's verdict, with the advice of the specialist, is of the highest value. There are, of course, various degrees of participation in a case by the specialist, but this should be decided by the family doctor, not by the patient.

"Too often, in this age of specialization, the patient takes a short cut direct to the specialist, thinking he is saving time and money. Here, indeed, 'a little knowledge is a dangerous thing.' For, in effect, when the patient decides what

kind of specialist to select, he is diagnosing his own case, which it is impossible for him to do. Even if he is a physician himself, he cannot safely diagnose his own case, and invariably when ill, doctors place themselves in the hands of another physician.

"I wish to emphasize again that you will be better off if you do not consult the specialist directly, but go first to your family doctor. Perhaps I would do well at this point to amplify the matter in greater detail. As I have said before, if there are no complications, doubts, or findings that require skills not possessed by the general practitioner, a specialist is not needed at all. Suppose that a patient, with a limited knowledge of the practice of medicine, but knowing there are such men as specialists, decides, for example, to consult what is known as a gastroenterologist because he feels uncomfortable in the region of his stomach. The man he picks will be one who specializes in diseases of the intestinal tract. But the patient is not as smart as he thinks he is. A pain in the region of the stomach may mean appendicitis or even heart trouble, and have nothing whatever to do with the stomach. When the patient makes his selection of a specialist, he is, in fact, trying to practice medicine on himself and diagnosing his own case. Now even if he were a doctor, he would be foolish to try to diagnose his own case, and not being a doctor, he is doubly foolish. For just as the specialist has a greater knowledge and experience in his specialty, *when the case falls within that specialty*, so he is probably less familiar with general diagnosis which is the province, the specialty, if I may use the term, of the general practitioner. So we see examples of people going from one kind of specialist to another, in a fruitless effort to diagnose their own cases. And they complain about the high cost of medical care. If they had gone to a general practitioner in the beginning, the nature of the disease might have been learned at once, and the problem solved at little trouble and expense. If this were not possible, such a patient would be referred directly to the kind of specialist needed, and a selection when made by the family doctor would be more likely to result in getting a good man than a choice made by the patient who can do little more than guess at the specialist's ability."

# Medical News

## Pneumonia Deaths Increase

A DECLINE in the infant mortality rate and an increase in the number of deaths from pneumonia were the outstanding features of the vital statistics for New York City during the week ending Saturday, May 11, according to Registrar of Records Thomas J. Duffield, in his weekly report to Health Commissioner John L. Rice.

"The infant death rate," says the report, "which (after being far below the average for the first three months of the year) rose to above 40 in the first week of April and remained above the rate dropped to 36.0 per thousand live births. This is slightly below the expected value. Drops of 9 each in the infant deaths ascribed to pneumonia and charged to prematurity were respon-

sible for the decline from the rate of the previous week.

The general death rate for the week was 10.7 per thousand of population, 1,574 deaths were reported. This rate is one-tenth of a point higher than that of the preceding week and one-half a point above the expected value for the week. It is the same, however, as the rate for the corresponding week of 1939.

One of the factors in the rise of the general death rate was an increase of 15 in the number of deaths from pneumonia. Although the number of new cases of pneumonia has been decreasing during the past two weeks, deaths in the week just closed numbered 84, as compared with 69 in the previous week."

## Meeting of the New York City Board of Health

THREE important matters engaged the attention of the New York City Board of Health at their regular meeting on May 14—namely, a decision on the requirements for milk sold in New York City, the approval of "high-temperature short-time" pasteurization of milk and the adoption of an entirely new revision of those sections of the Sanitary Code dealing with the sale and distribution of drugs, devices, and cosmetics.

The Board reached agreement on the requirements for milk, and the provisions of the Sanitary Code are to be amended to provide the following: All milk shall be designated "Approved Milk", the bacteria count of the milk as delivered to the consumer shall not exceed 30,000 per cc., butterfat content not less than 3.3 per cent., total solids not less than 11.5 per cent., standardization of milk not authorized, age limit between pasteurization and sale to the consumer forty-eight hours, tuberculin testing of all cows required. An improvement in the cap of the container is required. Such cap or closure must satisfactorily protect the milk from contamination, must completely and effectively cover the pouring lip of the bottle or single service container and must be of such type that its removal and replacement is capable of being readily detected.

The Board of Health agreed that milk with a distinctly higher butterfat content should be recognized, provided the butterfat is at least 4.2 per cent. Milk dealers desiring to sell such milk will be permitted to show this butterfat content on the bottle cap.

The entire bottle cap is to be reserved for the printed information required by the Department of Health Regulations and no trade name or other insignia will be permitted thereon. Similarly in the case of single service paper containers a space shall be reserved for such required printed information.

The Board of Health will not concern itself with trade names etc. and such may be used in advertising and elsewhere on the bottle or container provided they are not false or misleading.

Commenting on the Board's decision, Health Commissioner Rice said, "I can assure the public that all milk that meets these new standards will be safe and wholesome and may confidently be used for infant feeding. I can see no reason why these new requirements, which are now being met by actual performance, should increase the price of milk to the consumer."

For several years the Department has studied the "high-temperature, short-time" pasteurization for milk. Careful consideration has been given to the process as well as to the automatic apparatus proposed for such purpose. The Department is satisfied that this method with the improved equipment has now reached the point where its use should be allowed in New York City. The Board of Health has accordingly approved this new pasteurization process which calls for the heating of milk to a temperature of 160° F for 15 seconds.

The third important item on which the Board took definite action was the adoption of an entirely new revision of those sections of the Sanitary Code that deal with the sale and distribution of drugs, devices, and cosmetics. This action was taken after long consideration and study by the Department of Health and numerous conferences and consultations with the trade and others interested and concerned.

The revised sections now adopted represent a marked advance for the protection of the public and have been drafted to conform to the provisions of the new Federal Food and Drug Act and the similar law recently enacted by the State Legislature. Certain specified drugs may be sold only on a physician's prescription, the presence of certain active drugs in others must be clearly indicated on the label, if certain habit-forming drugs are present the preparation must bear a warning to that effect, there are strict provisions against false and misleading labeling and extravagant claims, the publication of false advertisements is prohibited.

The revised drug, devices, and cosmetic sections become effective July 1, 1940.



## County News

### Bronx County

With cooperation from the Bronx County Medical Society, the Bronx Tuberculosis and Health Committee, and the Cancer Committee, Tremont Health Center arranged a series of lectures, film showings, and exhibits for Manhattan College, 242nd Street and Broadway, for the week of April 22 to 27

Dr Louis A. Friedman, district health officer, spoke on "The Facilities and Functions of the Department of Health", Dr Charles Helman on "Nutrition in Relation to Health", Dr George Schwartz on "Heart and Circulation", Dr Clinton Martin on "Social Hygiene", Dr Irving Cheifetz on "Tuberculosis", and Dr George T. Pack on "Cancer"

### Cattaraugus County

A testimonial dinner for Dr John H. Korn, of Olean, who has been superintendent of Rocky Crest Sanatorium and director of tuberculosis work in Cattaraugus County and who has accepted a similar position in Westchester County, and for Mrs Korn, was attended by more than two hundred friends at the Bartlett Country Club in Olean on April 30

Many were the tributes to Dr Korn for his record in the fight against tuberculosis in Cattaraugus County, coming not only from local officials but from state and national dignitaries as well. Letters were received and read by Dr H. R. O'Brien, county commissioner of health, from Dr Thomas Parran, Jr., surgeon general of the United States Public Health Service, Dr E. S. Godfrey, Jr., New York State Commissioner of Health, Dr Robert Plunkett, superintendent of sanatoriums in the state, Dr Kendall Emerson of the National Tuberculosis Association, Dr R. M. Atwater of the American Public Health Association and former Cattaraugus County Health Commissioner, Homer Folks of the State Charities Aid Association, and Frank G. Boudreau, director of the Milbank Memorial Fund

Dr T. J. Holmlund, president of the Cattaraugus County Medical Society, presented Dr and Mrs Korn with a sterling silver bowl, the gift of friends throughout the county

### Chautauqua County

The Jamestown Medical Society held a dinner meeting on April 25 at the Hotel Jamestown, Dr Henry G. Morris presiding. Dr Carl Wiggers, professor of psychology at Western Reserve University, Cleveland, spoke on "Psychology, Its Advancement and Its Application to the Practice of Medicine". Dr F. R. Weedon, new director of laboratories, was introduced as a new member. He spoke at the meeting on May 30

### Clinton County

Clinton County physicians are reported up in arms against a recent action taken by the Board of Supervisors to curtail medical relief costs. The doctors claim that they are already giving their services in relief cases for fees scaled down to less than half of normal fees. The latest move of the supervisors will not only reduce the fees still further but may actually increase the amount of work the doctors are called upon to do with-

out giving them any compensation for the increase

A special meeting of the Clinton County Medical Society was held in Plattsburg on April 22. The situation was discussed at length, and a committee was appointed to meet with the supervisors and attempt to make other arrangements

A spokesman for the medical society said "While we physicians, as taxpayers and public spirited citizens, sympathize with the efforts of the Board of Supervisors to reduce welfare costs, we should not be asked to carry the whole burden of this effort. We have always cooperated with the county, as shown by our willingness to accept greatly reduced fees for the work done for welfare patients. We consider that in accepting these reduced fees we are actually giving part of our services free. Now we are being called upon to give still more, yet see no great effort being made to curtail expense in other directions, certainly no other individual or group is being asked to make the sacrifice that is demanded of us. We hope to be able to adjust the matter satisfactorily with the Board of Supervisors but are prepared to go further if necessary to protect our rights"

### Delaware County

Dr Robert Brittain, of Downsville, who has been practicing medicine for fifty years and a goodly part of it in the Downsville area, was given a reception on Tuesday, May 21, by the Delaware County Medical Society. The dinner was served at 6:30 p.m., to the doctors in attendance, after which they repaired to the Opera House, where a large gathering of friends were assembled and where the toasts and talks were given from the stage

Dr Brittain comes from a line of physicians. His great grandfather was among the first to be given a diploma in this state. His grandfather and uncle were railroad surgeons on the Erie for years, having charge of the surgical work between Port Jervis and Susquehanna on the Delaware Division, and residing at Cohecton, Sullivan County. Dr Brittain did much to eliminate typhoid fever in the town of Colchester by sanitary means and to eradicate diphtheria by immunization

### Dutchess County

The Dutchess County Medical Society, at a regular meeting on May 1 in Poughkeepsie at the Amrita Club, heard a discussion about "Proptose Eye as a Diagnostic Problem," by Dr Ralph I. Lloyd, consulting ophthalmologist of Brooklyn

### Jefferson County

The Jefferson County Medical Society held its regular monthly meeting at the Black River Valley Club on May 2. The speaker was Dr Richard Kovács, who discussed galvanic and low frequency currents, electrodiagnosis, and physical therapy in gynecology

### Kings County

The annual outing of the North Brooklyn Medical Society will be held on June 13 at the Brookfield Country Club

Dr Henry H. Morton, of Brooklyn, widely known authority on venereal diseases and professor emeritus of genitourinary ailments at Long Island College Hospital, died at the age of 80 in Gulfport, Florida, on May 3.

Dr Morton wrote *Genito-Urinary Diseases and Syphilis* in 1902, a textbook that subsequently was revised through six editions. He was sent to Austria in 1925, when physicians there originated a method of treating paresis patients by infecting them with malaria. When he returned he encountered considerable difficulty in starting the treatment, as malaria was practically unknown in New York City.

#### Monroe County

Dr William F. Clark, honor graduate of the University of Rochester Medical School, received the Bausch & Lomb award at the annual meeting of the Rochester Academy of Medicine on May 1.

A council of judges of the academy makes the award each year to a graduate honor student for the best thesis for the advancement of medical progress.

Dr Clark, now associated with the Geisinger Memorial Hospital at Danville, Pennsylvania, will join the staff of the University of Rochester Medical School on July 1 in the department of pathology.

Dr Albert D. Kaiser, president of the Monroe County Medical Society, was the guest speaker at a luncheon meeting of the Monroe County Health Group, at the Roxbury Inn on May 2.

Dr Kaiser spoke on "Children in a Democracy."

#### Nassau County

The Nassau County Medical Society met at the Cathedral House on April 30. Dr Norman Plummer, of the New York and Manhattan state hospitals, discussed, "Pneumonia, Diagnosis and Treatment," illustrated with motion pictures.

The society held its annual meeting and election of officers on May 28.

A special committee of the Nassau Medical Society will cooperate with parent-teacher associations in the improved summer round-up program of preschool children, according to the *Nassau Medical News*.

"The national program," states the *News*, "is now based upon an appeal to parents to take the preschool child to the family physician who will not merely discover physical defects but also assist in securing their correction."

"In Nassau County there are several parent-teacher associations experimenting with this new system. The medical society is cooperating through a special committee recently created for the purpose and is pleased to offer its services to any group that wishes to undertake the work."

The *Medical News* explains the new plan as follows:

"The parent is provided with a copy of the official school examination form which she takes to her own physician with the child to be examined. When this form is filled out and signed by the examining physician it becomes part of the official school health record of the child and makes it unnecessary for the school medical inspector to examine him when school opens.

"This makes available more of the doctor's time for the examination of those children who have not been reached in the round-up and results in a better examination for that group as well as for those whose parents have cooperated."

"The summer round-up committee of the medical society will be pleased to assist local parent-teacher associations in the preparation of publicity material or in securing the cooperation of local physicians and has available a limited supply of examination blanks especially arranged for the convenience of the doctors who make the examinations."

#### New York County

More than half the applicants for membership, at a recent meeting of the Medical Society of the County of New York, were graduates of foreign universities, more especially of Germany and Austria, notes a correspondent of the *New York Medical Week*, and he observes:

Those familiar with the history of our medical profession in New York will recall the unusual influx of fugitive physicians after the 1848 rapidly suppressed semirevolution in Prussia. They may also recall the extensive immigration of German physicians after the Franco-German war in 1870. At that time the German physicians were loathe to join American medical societies. Imbued as they were with an inflated superiority complex, they built up German-speaking medical societies, which formed the "fifth column" for dissemination of so-called German culture propagated by German officialdom.

Things have changed. Today the foreign physicians fully realize that American medicine has made great strides and is equal, if not by far more scientific, than medicine of Europe. They join the society to learn many things neglected in German universities. They join to become assimilated with the progressive medical men of the United States.

The New York Surgical Society met on May 8 at the New York Academy of Medicine, with this program:

(1) Gangrene of the Face in an Infant—Plastic Repair and Contracture of the Neck from Burns—Plastic Repair by Dr. Fenwick Beekman.

(2) Colectomy for Ulcerative Colitis with Restoration by Ileosigmoidostomy, Devine Procedure for Treatment of Surgical Lesions of the Left Colon—2 Cases, Primary Resection of Sigmoid for Advanced Carcinoma, Primary Posterior Resection of Rectosigmoid for Adenoma with End-to-End Restoration by Dr. John H. Morris.

(3) Successful Suture of Stab Wounds of the Heart—2 Cases by Dr. Joseph B. Stenbuck.

(4) Adrenal Cortical Carcinoma with Hirsutism and Obesity by Dr. Morris K. Smith.

(5) Cases illustrating the paper of the evening by Dr. Grant Pennoyer.

The paper of the evening was "Peripheral Arterial Disease," by Dr. Grant Pennoyer.

The second annual concert of the Doctors' Orchestral Society of New York, again with Ignatz Waghalter as conductor, at Town Hall, Friday evening, May 10, gave this interesting program: The Fifth Symphony by Tchaikowsky, a Czech number by Smetana, Wagner's "Tristan and Isolde," Goldmark's "Sakundala" overture. The soloist was the well-known tenor, Dr. Leopold

Glushak, in excerpts from Wagner's "Meistersinger" and "Lohengrin," also from Mozart's "Don Giovanni"

The New York Society for Thoracic Surgery, at its meeting on May 10 at the New York Academy of Medicine, listened to the following papers (1) Modifications of the Monaldi Instrument and Technique by Dr Louis R. Davidson, (2) Cysts of the Lung by Dr Richard H. Dieffenbach and Dr Henry A. Brodtkin, (3) Surgical Ligation of Patent Ductus Arteriosus by Dr George H. Humphreys, (4) Two Cases Simulating Coronary Artery Aneurysm—Differential Diagnosis with Intravenous Diodrast by Dr Samuel A. Thompson, (5) Subtotal Pneumonectomy for Bronchiectasis by Dr Charles W. Lester, (6) Posterior Mediastinal Neurofibroma of Intraspinal Origin by Dr Arthur S. Touroff

A combined meeting of the New York Neurological Society and the Section of Neurology and Psychiatry of the Academy was held on May 7. The papers of the evening were (1) Periodic Dullness As an Epileptic Equivalent by Dr H. H. Merritt (Boston) and Dr Tracy J. Putnam—discussion by Dr Richard M. Brickner, (2) Electroencephalographic Localization of Focal Cerebral Lesions by Dr Herbert Jasper (Montreal)—discussion by Dr Leo M. Davidoff, and (3) The Repetitive Core of Neurosis by Dr Lawrence S. Kubie—discussion by Dr Bertram D. Lewin.

The program of the Russian Medical Society of New York, on April 29, at Squibb Hall was as follows "Radiotherapy of Cancer and Non-Malignant Diseases"—(a) Clinical Aspects by Dr Albert Kean, by invitation, (b) Pathological Aspects by Dr Angelo Sala, by invitation. There was a general discussion.

The Harlem Medical Association met at Squibb Hall on May 1 and listened to the following addresses:

(1) Haematuria (a) Its Causes, (b) Diagnosis, (c) Treatment, by Dr Thomas J. Kirwin, attending surgeon, James Buchanan Brady Urological Foundation, New York Hospital, and New York City Hospital.

(2) Plastic Surgery Cases for Clinical Presentation (a) Mishandled Bust Cases, (b) Properly Handled Bust Cases, (c) Mishandled Rhinoplasty, (d) Mishandled Nasal Reconstruction, by Dr Keith Kahn, plastic surgeon, Lutheran Hospital, New York City, and consulting plastic surgeon, Northern Westchester Hospital, Mount Kisco, New York.

(3) Complete Avulsion of Skin and Subcutaneous Tissue of the Foot Compound Fracture of All Toes, Plastic Operations, by Dr Herbert E. Stein, associate surgeon, Hospital for Joint Diseases, New York City.

#### Onondaga County

Dr Frederick S. Wetherell addressed the Onondaga County Medical Society at its meeting on April 30 at the College of Medicine on "Nodular (Adenomatous) Goiter."

#### Orange County

The second annual Health Institute of Orange County, under the auspices of the Medical Society of the County of Orange and its woman's

auxiliary, was held in the Goshen Theatre on May 2.

The program consisted of three educational talks by Orange County physicians, on current medical subjects, and a motion picture.

#### Queens County

These addresses featured the program of the Medical Society of the County of Queens at its meeting on April 30 "Frozen Sleep Therapy in Cancer," by Dr John C. A. Gerster, surgeon, Lenox Hill Hospital, and surgeon, Skin and Cancer Unit—P.G., "Malignancy of the Large Bowel and Rectum," by Dr Chas. Gordon Heyd, surgeon, Post-Graduate Hospital, and consultant, Woman's Hospital.

The Friday afternoon talks on May 3 and 17, respectively, were as follows:

"Why Women Live Through Childbirth" (Talk divided into two parts, the second part devoted to a discussion of the ordinary clinical problems affecting the obstetrician), by Dr Edward A. Schumann, professor of obstetrics, University of Pennsylvania Medical College.

"Carcinoma of the Rectum and Colon," by Dr Frank C. Yeomans, surgeon, Polyclinic, consultant proctologist, Cancer Institute, associate surgeon, New York Hospital. Dr Yeomans' talk included occurrence, physical and instrumental examination, differential diagnosis, laboratory aids, treatment—irradiation, electrosurgery, cryotherapy (artificial hibernation), and surgery, operability, choice of operation—one-stage and two-stage procedures.

Dr Alfred Calvelly, of Inwood, has been elected president of the Rockaway Medical Society for the ensuing year. Other officers elected were Dr Herbert Gordon, of Far Rockaway, vice president, Dr Irving G. Frohman, Rockaway Beach, treasurer, Dr Griswold D. Nammack, Far Rockaway, secretary.

The election was held at a dinner meeting at the Lawrence Village Park Clubhouse.

#### Richmond County

A forum on medical jurisprudence, the first of its kind in years, sponsored by the Richmond County Bar Association and the Richmond County Medical Society, was held on May 2 at the Meurot Club, St. George.

The forum preceded by an informal dinner, had as principal speaker Dr. George I. Swetlow, professor of medical jurisprudence at Brooklyn College. Prominent in the field of neurology and psychiatry, Dr. Swetlow spoke on "Hysteria and Malingering."

#### St. Lawrence County

Dr Samuel W. Close, Gouverneur, was guest of honor at the meeting of the St. Lawrence County Medical Society at Canton on May 3, at which the county's physicians went on record, with only two dissenting votes, in favor of the "Utica Insurance Medical Plan." Dr. Close celebrated his 83rd birthday May 3, as well as the anniversary of entering practice in St. Lawrence County fifty-five years ago.

Dr Robert J. Reynolds, of Potsdam, secretary of the society, submitted the resolution favoring the "Utica Plan" which will provide medical care in return for annual charge of \$16.80 for the heads of families, \$13.80 for wives

and for dependents between the ages of 16 and 18, and \$8.40 for each child under that age.

Persons subscribing to the plan will have the choice of calling any physician who is a member. The first two calls of any one illness must be paid by the patient and the plan goes into effect on calls that follow.

Physicians operating on a rate scale similar to that of Canton will benefit to some extent for their calls, as the plan provides for \$2.00 for office calls and \$3.00 for outside calls. At present, Canton physicians charge \$1.00 for office calls and \$2.00 for outside calls.

Dr. Richard Kovacs, of New York City, was the guest speaker at the meeting, his subject being "Electrodiagnosis." He illustrated his lecture with pictures of the uses of various apparatus now being developed.

A luncheon opened the meeting at 1 P.M. Dr. David Mills Gouverneur, president of the society, presided.

## Suffolk County

The Suffolk County Medical Society met at Smithtown on April 24 and, without a single dissenting voice, voted to uphold the ordinance of the Suffolk County Health Department regarding compulsory pasteurization of milk. The ordinance adopted by the Board of Health on October 18, 1939, reads: "Be it resolved that on and after July 1, 1940, all milk sold or offered for sale in Suffolk County, except certified milk, shall be pasteurized." Discussion of the measure before voting brought out the fact that the sale of raw milk is not banned by the present ordinance provided the milk is produced in conformity with the standards of cleanliness and sanitary requirements set forth by the State Department of Health for certified milk. The purpose of the resolution is to prevent a recurrence of epidemics of milkborne diseases such as have occurred in the past.

## Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
John R. Brownell	63	Chicago Hom	April 10	Perry
Ernest M. Cierihow	72	Queens Canada	April 25	Manhattan
John Cotton	90	Harvard	April 27	Burnt Hills
Calvin B. Coulter	51	P & S N Y	May 9	Manhasset
Walter T. Diver	56	Albany	April 8	Troy
Elmer E. Eddy	76	Buffalo	March 14	Redwood
Roland R. Johnson	58	L I C Hosp	April 29	Brooklyn
Thomas D. Macdonald	59	P & S Balt.	April 25	Central Valley
Henry M. Mills	70	L I C Hosp	April 26	Brooklyn
Henry H. Morton	78	L I C Hosp	May 3	Brooklyn
Fernando Roys	94	Northwestern	April 26	Syracuse
Walter J. Smith	57	Albany	April 25	Brooklyn

## ROCHESTER STARTED SOMETHING

Volunteer blood donor organizations, with a total membership close to 98,000 now serve fifty-six communities throughout the country as the result of the influence of an organization that began in Rochester, New York, only three years ago. Arthur John Collinson, Rochester, points out in the March issue of *Hygeia*, The Health Magazine.

Known as the Legion of Blood Donors, the Rochester association up to January, 1940, had contributed more than 970 transfusions given without pay from anonymous donors. The Legion owes much of its effectiveness to the simple way in which it is run and the speed with which requests for blood are answered. Volunteers get in touch with the *Times-Union* newspaper which cooperated with a radio broadcaster in founding the organization. Arrangements are made to have the volunteers' blood typed into one of the four classifications at a local hospital. With over 1,200 names on file, the Legion loses little time in finding a proper donor. Often a general appeal is made in a radio announcement.

Radio stations have cooperated in sponsoring the plan in other cities.

## OPTOMETRY NOT ENOUGH

School physicians and nurses discover many cases of defective vision and advise the parents to take the children to a physician for diagnosis and treatment. This advice is important, observes the *Journal of the Medical Society of New Jersey*, because many cases of defective vision are caused by pathologic changes in the eye itself or some disturbance elsewhere in the body—conditions which an optometrist is incapable of diagnosing or treating. The physician is the proper one to decide whether an individual case needs the services of a specialist and what kind of specialist.

Furthermore, in many cases of refractive error, especially in young children, no one can make accurate examination without the aid of a cycloplegic ("drops"), a procedure which optometrists cannot legally employ.

Since an accurate diagnosis is a necessary preliminary to any treatment, the school nurse is legally required to advise the parents of a child to have a diagnosis made by a licensed physician for only he is empowered to make a pathologic diagnosis and to prescribe drugs and operations for relief.

# Hospital News

## "Flying Squad" Cuts Maternal Mortality

**A**n "obstetrical flying squad," composed of a nurse, a doctor, and an ambulance driver, is a recent and already successful means of reducing maternal mortality in Erie County.

Equipped with heart stimulants and blood transfusion apparatus, the three-person unit stands ready night and day to answer any physician's call from any part of Erie County.

The plan, dubbed "maternity emergency" by nurses and interns, has been in operation six months, officials of Millard Fillmore Hospital, its sponsor, announce.

"The lives of at least three mothers have been saved by the squad," Dr. Milton G. Potter, chief of the hospital's obstetric staff, said.

## Home Births Still Lead

"While the number of obstetrical cases in hospitals is increasing," he explained, the majority of babies still are born at home.

"This normally is safe because of efficient district nurses and improved sanitary conditions."

But, occasionally, serious complications arise—spontaneous hemorrhage or shock.

"It is now generally felt by the medical profession that while it is desirable to move a shocked hemorrhaging patient to the hospital as soon as possible, much harm and additional shock can be brought about by transferring the patient by ambulance too soon," Dr. Potter added. This is where the "squad" comes in.

Necessary heart stimulants, medications for shock treatment, ordinary "hot-water" bottles make up part of the equipment.

## Can Give Transfusion

In addition, the "squad" car carries apparatus for the immediate transfusion of type IV blood, obtained from the hospital's "blood bank" and which can be given to anyone, while blood of potential donors related to the patient is typed for future use.

"The average call so far has been less than 12 miles, briefer than two hours, but they're all dramatic," said Dr. Norman J. Foit, resident physician whose first duty is to assign the first nurse available to "squad" duty with him.

"One call took us to a hospital 45 miles away," he related. "An immediate transfusion was imperative and the hospital had no equipment and they called us. The nurses like it. In fact they ask for the job," he added.

## Consolidation of New York City Medical Services

**C**ONSOLIDATION of virtually every city medical service into a new department of medical care is urged by Dr. S. S. Goldwater, hospital commissioner, in a report to Mayor La Guardia outlining the problems confronting his department.

Despite a great deal of new construction, Dr. Goldwater said, the city hospitals were now overcrowded as they never had been. He reported that about one-half the city's population was eligible for free care in city institutions, adding that the patient-census continued at a high figure because of the general economic condition in the city. Although his department had tried to curtail the number of patients by inquiring closely into their eligibility for city care, Dr. Goldwater said that investigation had disclosed a minor percentage of improper applications.

With the resources of private hospitals dwindling, Dr. Goldwater said the city could not expect the same amount of supplementary hospitalization from these institutions that was given formerly. In the current budget the request of Controller Joseph D. McGoldrick for increased city compensation to private hospitals for the care of city cases was denied.

## More New Hospitals Needed

Dr. Goldwater said all branches of the city's organized medical service could be consolidated into a new department, with the exception of medical activities under the supervision of the Health Department. His suggestion, if adopted, would coordinate the work of physicians and nurses in a large number of city departments.

Although he was asked last year to limit his department's capital outlay budget to not more than \$20,000,000 for the next six years, Dr. Goldwater said that he could not conscientiously observe the limit. Instead, he said, he submitted a list of hospital projects running to \$100,000,000 in the conviction that it was his duty to outline an adequate program of future hospitalization.

He pointed out that about two-thirds of the physicians in his department served without pay, a condition not paralleled in any other city department. Dr. Goldwater declared that the department's freedom from political influence was known throughout the country. He said it would continue to make the best possible use of its resources in meeting its problems.

## Newsy Notes

The Medical Staff of Morrisania Hospital honored at a testimonial dinner on May 4 at the Hotel Biltmore five staff members who had been elevated to national, state, and county offices.

These were Dr. William L. Bollens, attending dental surgeon at the hospital and president of Bronx County Dental Society, Dr. Terry M. Townsend, director of urology at the hospital and past-president of New York State Medical

Society, Dr. Nathan B. Van Etten, president of the hospital's medical board and president-elect of the American Medical Association, Dr. George E. Milani, director of surgery at the hospital and president of the Bronx County Medical Society, and Dr. Harry Aranow, director of obstetrics at the hospital and a member of the Council of the Medical Society of the State of New York.

Bequests of over \$665,000 to 28 public welfare institutions are contained in the recently filed will of the late Mrs Marie S Engert-Colman of Brooklyn. Among these beneficiaries are St. Mary's Hospital receiving \$50,000, Long Island College, St. Peter's, Wyckoff Heights, St. Catherine's Brooklyn, Mary Immaculate, and St. Vincent's hospitals, \$30,000 each

The Charity Eye, Ear and Throat Hospital of Erie County celebrated its fiftieth anniversary in April.

Corning Hospital has opened a tumor clinic, with Dr Rudolph J Shafer, director of county laboratories, as chief

James J Lyons Borough president of the Bronx, in a letter to Mayor F H La Guardia has suggested the establishment of a 'hospital sweepstakes' in connection with horse races conducted on tracks within the City of New York

The Lying-In Hospital, the obstetric and gynecologic division of the New York Hospital announces in its fourteenth annual report that the maternal mortality rate during the last year shows a continued decline with a ratio of 0.669 for 1,000 patients

The gross maternal mortality for 4,019 discharges in maternity cases was 0.497 for 1,000 discharges with two maternal deaths reported. Since some of the patients had more than one admission during the period of gestation the corrected rate was 0.669 for 1,000 patients, it was reported by Dr Hendricus J Stander, obstetrician and gynecologist-in-chief

The maternal mortality rate in the hospital from Sept. 1, 1932, to Dec 31, 1939, was 1.87 a thousand for 29,840 patients discharged the report added

Plans are being made by the management of the Clifton Springs Sanitarium for the celebration of the institution's ninetieth birthday, on Sept. 13

The Community Hospital, formerly at Ghent, has removed to Chatham

Schenectady City Hospital is starting court actions to collect overdue accounts

A general transfusion service financed by an annual grant of \$5,000 from the Francis Hendricks endowment for medical research is to be established in the Syracuse medical center July 1 under the direction of Dr John B Alsever

Dr Herman G Weiskotten, dean of the College of Medicine, Syracuse University said the service would be administered by the college's department of clinical pathology, of which Dr William A Groat is head

The new unit will be operated on a twenty four-

hour basis, and Dr Alsever will be assisted by a full time resident physician and a full-time specially trained technician

Administration and operation of the Syracuse City Hospital is praised highly in a report from the State Department of Social Welfare received by Dr H Burton Doust, health commissioner, and Mrs Genevieve N Clifford, superintendent of the hospital

A letter from Arthur H Hoddick director of the state bureau of welfare institutions and agencies, received by Mrs Clifford and Dr Doust it was stated "We congratulate you on the excellent management of your fine institution."

At the quarterly meeting of the Board of Directors of Group Hospital Service, Inc, held April 25 in Syracuse President Albert M LeMessurier reported that 17,787 hospital claims totaling \$905,828.77 had been paid from January 1, 1936 to March 31 1940. He further stated that there was a net increase of approximately 2,600 in membership census during the first quarter of 1940 and, as of March 31, 95,092 people in Central New York are covered by service contracts with the Blue Cross Plan

## Improvements

Enlargement and modernization of the Amsterdam City Hospital was approved at an enthusiastic dinner meeting on April 23. The project entails the expenditure of \$115,000, to be secured through public subscriptions

The Astoria Kiwanis Club has presented a baby incubator to St. John's Hospital

"The slogan of this club," said Dr George P Palmer, first deputy commissioner of health, at a dedication affair at Steinway Lodge, 'should be Bring Them Back Alive.'"

The board of visitors of the Binghamton State Hospital recommends construction of additional facilities for patients and medical staff members and announces curtailment of some activities to meet a cut in the budget for the current fiscal year

The board in its annual report urges erection of a new infirmary for hospital patients and employees expansion of the storehouse, and installation of a pasteurizing plant

The board cites difficulty in obtaining enough young physicians to join the medical and psychiatric staff because of lack of proper housing "for staff members

Many of our married physicians are obliged to live in quarters in buildings occupied by patients" the report said. "Funds should be provided as soon as possible for the erection of a four-family staff house to properly house the members of our medical staff"

A new outpatient building at Kings County Hospital costing \$789,700 and five stories high

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# Medicolegal

## Alleged Erroneous Diagnosis of Tuberculosis

A MAN, aged 45, consulted a physician engaged in general practice, complaining of pain for a period of about a year in his lower right chest which he stated had been becoming more acute for a period of two weeks. He had no history of expectoration of blood, complained of some coughing which he attributed to cigarette smoking. Loss of weight was claimed. Examination indicated a condition of pleurisy, and because of the long duration of the complaint of pain, x-rays were advised.

He was referred to a radiologist for the purpose of having x-rays taken, and a report was received by the first physician suspicious of tuberculosis. He advised patient to have a complete blood count, Wassermann, urine, and sputum tests made, and when a few days later, the patient returned to the physician for the purpose of commencing the series of tests, he told the physician that he had coughed up blood that morning and the previous morning. The patient was advised to enter a sanatorium for observation.

The patient did enter a sanatorium under the care of other doctors, and after undergoing a period of observation, his condition was finally diagnosed as nontuberculous.

Subsequently, he instituted a malpractice action against the general practitioner charging him with negligently having advised him to undergo hospitalization when in fact he was not suffering from tuberculosis. He included in the allegations of his complaint that by reason of the erroneous diagnosis, he was discharged from his employment.

When the case came on for trial plaintiff was unable to establish by competent medical testimony that the defendant had been guilty of malpractice in his handling of the case, and the complaint was therefore dismissed at the close of the testimony adduced on behalf of the plaintiff.

## Complications Following Appendectomy

A MIDDLE-AGED man consulted a physician who devoted his practice to general surgery with respect to complaints of pain and tenderness upon pressure in the lower right quadrant of his abdomen. After several examinations, he was advised that he was suffering from an acute exacerbation of chronic appendicitis and an operation was advised. The appendix was found to be retrocecal and adherent. The operation was completed without any untoward occurrence.

Two days following the operation, however, the patient developed a condition of acute bronchitis for which he received care. His recovery was complicated by a cough causing the external portion of the wound to open. A number of days later a condition of phlebitis developed, further complicating the case. The patient remained in the hospital for five weeks following the operation. At that time, his condition was satisfactory, but he still required further care with respect to the phlebitis. For said condition, he was referred to a specialist.

The surgeon instituted an action in the Municipal Court to recover his unpaid fee and in said case the patient interposed an answer that the services were worthless, and that the doctor had committed malpractice in treating him. The patient also brought an action in the Supreme Court based upon alleged malpractice claiming in general terms improper treatment throughout the period of care rendered by the doctor.

The doctor's action to recover his fee came on for trial first. The patient failed to produce any competent testimony to the effect that any of the medical or surgical care which he had received was other than proper. Said trial resulted in a verdict in favor of the doctor for the amount of his bill, whereupon the attorney for the patient discontinued the Supreme Court malpractice action, thereby terminating the entire matter successfully in favor of the doctor.

## NU SIGMA NU MEDICAL FRATERNITY

*Nu Sigma Nu Medical Fraternity* luncheon, Wednesday, June 12 12 30 P.M. at the Yale Club, 50 Vanderbilt Avenue at Forty-Fourth Street. Tickets may be obtained at the Nu Sigma Nu booth in the General Social Headquarters on the third floor of Grand Central Palace during the A.M.A. Convention or

by writing or telephoning (REgent 4-6264) Dr. Arthur F. Warren, 667 Madison Avenue New York City. There will be two short talks "Changing Medicine" by Dr. Francis Carter Wood, New York, and "The Fraternity" by Dr. Stuart Graves Tuscaloosa, Alabama executive secretary of Nu Sigma Nu.

## ERRATUM

Our attention has been called to an error that appeared in the Annual Meeting announcement of Scientific Exhibits. The title of Exhibit No. 59 should have read as follows:

John B. Schwedel, M.D.  
Montefiore Hospital  
and

Harry E. Ungerleider, M.D.  
Equitable Life Assurance Society  
Aids in Cardiac Fluoroscopic "



will be built soon. The Board of Estimate adopted a resolution providing for the issuance of serial bonds and tax notes to cover the cost and approved plans for the construction on April 18.

A modern x-ray equipment with fluoroscopic attachments is to be secured by the Canastota Memorial Hospital.

Col Arthur H. Carter, chairman of the building committee of the Greenwich Hospital, announces that the Board of Directors has approved final plans of the proposed new five-story hospital building, alterations of the present hospital building into a nurses' and employees' home, and a new heating plant.

The new hospital building will provide for 170 beds and 30 bassinets, and six rooms for interns. The building will also include new kitchen department, dining rooms, x-ray department, laboratory, general offices, and operating department. The new laundry will be included in the power plant building. The present hospital accommodates 115 beds and 20 bassinets.

The new building is so designed that it can be enlarged to provide up to 300 beds without enlargement of the space now allotted to the service departments. The new building will be located to the south of the west wing of the present hospital.

The new Nassau Hospital building at Mineola is nearing completion. With the 135 beds in the new building, and maternity and private pavilions, the hospital will have a total capacity of 227 beds. In the maternity building there will be 27 beds and 30 bassinets. In the private pavilion, 65 patients may be accommodated. This will include 27 beds for children.

Work on a new building, which will provide supplementary space for the treatment of women patients at the New York Hospital, Westchester Division, will begin soon, it is announced by the hospital board of governors.

St Luke's Hospital, New York City, has opened a new semi-private service for children on the fourth floor of the Plant pavilion. Recent donations and legacies include \$10,000 from an anonymous friend for an endowment fund for special nursing, \$2,000 from various friends to remodel the orthopedic ward, \$2,000 from an anonymous donor for the ear, nose, and throat department, \$7,500 from the estate of Andrew Purdy to endow a ward bed, the same amount from the Louise Baier estate for a like purpose, \$9,000 from the Henrietta T. Jones estate to endow care of sick nurses, \$6,614.60 for general purposes from various churches and friends, \$2,000 for dental clinic equipment from one of the board of managers, \$718.68 for Christmas from various donors, \$902.03 from seven friends for various purposes, \$263.53 for orthopedic work from Infantile Paralysis Foundation,

\$50 for convalescent hospital purposes, by an employee.

The Niagara Falls Memorial Hospital has installed an x-ray department at a cost of \$23,000, the gift of Charles J. Holland-Moritz, a former local resident.

Hepburn Memorial Hospital, at Ogdensburg, is spending \$40,000 for equipment and improvements for its x-ray department, designed to make it the most complete of any hospital in northern New York.

A 250,000-volt General Electric x-ray therapy machine for cancer treatment is included in the equipment being installed, as well as portable x-ray equipment for use at the bedside of patients.

The department will occupy eleven rooms in the basement and ground floor of the west wing of the hospital. Walls, floors, and doors of treatment rooms will be insulated with lead sheeting.

Dr Arthur A. Hobbs, Jr., will be director of the department.

Completely renovated, the three-story building on Bay Avenue and Newins Street, Patchogue, formerly known as the Community Hospital, will be opened as the Patchogue General Hospital.

The new hospital, which will have 25 beds, will be operated by Mrs. Georgina Burkhardt, a registered nurse. The hospital will be governed by a board of physicians from Patchogue and vicinity.

A drive to raise \$150,000 to build and equip a new Eastern Putnam Hospital is on.

A committee of one hundred is sponsoring the move to give the county better hospital service. The proposed new building will have 50 beds.

The new hospital will be fully equipped with complete x-ray laboratory, pathologic laboratory, operating rooms, major and minor, and delivery room. It is to have private rooms, semi-private rooms, ward rooms, and 8 bassinets.

Backed by Hospital Commissioner S. S. Goldwater's promise of cooperation, the Queens Southside Allied Association will seek the support of all affiliate groups in a campaign for a city hospital in South Queens.

Plans for the construction of an addition to the Syracuse General Hospital, modernization of the present building, and construction of a home for nurses are now being made by the executive board.

The board is considering a campaign for a \$500,000 fund to pay the cost of construction and to retire the institution's capital debt.

The campaign will be opened in 1941 and construction started at the same time, if business conditions permit.

The proposed addition to the hospital building would provide room for 60 beds, while the nurses home would have accommodations for 75.

*Finance*

Mrs Louis A Van Kleeck  
29-30 Northern Boulevard  
Manhasset, N Y

*Organization*

Mrs R. F Johnson  
22 Swift Street  
Auburn, N Y

*Press and Publicity*

Mrs F Leslie Sullivan  
16 Sunnyside Road  
Scotia, N Y

*Program*

Mrs Albert M Bell  
Sea Cliff Avenue  
Sea Cliff, N Y

*Historian*

Mrs Otto Pfaff  
224 Lenox Avenue  
Oneida, N Y

*Hygiene*

Mrs Joseph P Dasko  
1835 Fifth Avenue  
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*Legislation*

Mrs Albert Vander Veer, II  
12 Harris Avenue  
Albany, N Y

*Public Relations*

Mrs S W S Toms  
120 South Broadway  
Nyack, N Y

*Parliamentarian*

Mrs John Robertson  
82 Main Street  
Binghamton, N Y

*Printing and Supplies*

Mrs Stanley Jones  
Mattituck L I, N Y

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**National Woman's Auxiliary Convention**

National Woman's Auxiliary Convention at New York City from June 10 to 14 Headquarters—Hotel Pennsylvania

Do make this a *must go* on your calendar of events Mrs Carlton Potter, as general chairman, and a committee of twenty-six hard-working women with co-chairmen and assistants are virtually working day and night to make this an outstanding meeting Come and show the National Organization that New York State is on the map Events will include banquets

and luncheons with surprise events, sight-seeing trip tickets, a special presentation of 'Beauty in the Making,' scenic air flights over New York City, and instructive tours of all descriptions Well-known personages of the medical profession will take part in our meetings Auxiliary members guests, and visiting doctors' wives are cordially invited to attend Make reservations to

Dr Peter Irving  
292 Madison Avenue  
New York, New York

**Convention Committees***General Chairman*

Mrs Carlton F Potter

425 Waverly Avenue, Syracuse

*Advisory Committee*

Mrs John L Bauer  
Mrs Francis R. Irving  
Mrs Luther H Kice  
Mrs Daniel J Swan  
Mrs G Scott Towne

984 Bushwick Avenue Brooklyn  
119 Wendell Terrace, Syracuse  
95 Brook Street, Garden City  
141-54 Northern Boulevard, Flushing  
150 Phila Street, Saratoga Springs

**Committee Chairmen***Chairman**Address*

Committee  
Acknowledgments  
Cred & Regs  
Dinner (Annual—Thur)  
Dinner (Monday)  
Entertainment  
Favors  
Flower  
Headquarters  
Hosp & Inform  
Hotels  
Junior Ushers  
Lunch (Tuesday)  
Lunch (Annual—Wed)  
Music  
National Exhibits  
Printing  
Publicity  
Supplies  
Tea  
Tickets  
Transportation

Mrs Miller A Sanders  
Mrs J Emerson Noll  
Mrs Byron St. John  
Advisory Committee  
Mrs Michael M Schultz  
Mrs Brooks W McCuen  
Mrs Robert F Barber  
Mrs Edwin A Griffin  
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Mrs George H Smith  
Mrs Nathaniel H Robin  
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Mrs Edgar M Neptune  
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Mrs Thomas E Bullard  
Mrs Harry P Mencken  
Mrs Louis M Lally  
Advisory Committee  
Mrs Louis A Van Kleeck  
Mrs Paul Shuey

109-14 Ascan Avenue, Forest Hills  
19 Elizabeth Street, Port Jervis  
Beacon Hill, Port Washington  
89-36 190th Street, Hollis  
109 Hampshire Road, Syracuse  
1257 Dean Street, Brooklyn  
311 Garfield Place Brooklyn  
373 Sea Cliff Avenue Sea Cliff  
161 Hancock Street, Brooklyn  
106 Hilton Avenue, Hempstead  
147-44 Jasmine Avenue, Flushing  
122 76th Street, Brooklyn  
243 Shotwell Park, Syracuse  
3900 Atlantic Avenue, Atlantic City  
Church Street, Schuylerville  
35-40 165th Street, Flushing  
27 Verbena Avenue, Floral Park  
29-30 Northern Boulevard Manhasset  
33-15 80th Street, Jackson Heights

# The Woman's Auxiliary

To the Medical Society of the State of New York

**P**LEASANT are the memories of the three hundred women who attended the Fifth Annual Convention of The Woman's Auxiliary to the Medical Society of the State of New York which assembled at the Waldorf-Astoria from May 6 to 10. The success of the meeting was evidenced by the interest of the members.

Business sessions were held throughout Monday. At these the serious-minded assembled delegates were afforded opportunities to take part in an official capacity directing into proper channels the aims and functions of the auxiliary. Mrs. G. Scott Towne, to whom we owe our appreciation for the skillful, untiring, and conscientious manner in which she served as president for the past year, conducted this phase of the convention. Chairmen of standing committees and twenty-three county presidents informed the delegation of the work done in their respective departments and counties. During this session Dr. Terry M. Townsend, president of the Medical Society, brought greetings from his organization. Dr. Louis A. Van Kleeck of Nassau County cheerfully gave his time in an address. He remarked that the auxiliary had become a potent factor in the medical profession, first, by bringing the families of doctors together and secondly by bringing the doctor closer to the public through contacts made by auxiliary members with lay organizations.

## *President*

Mrs. Luther H. Kice  
95 Brook Street  
Garden City, N. Y.

## *President-elect*

Mrs. George B. Adams  
141 Genesee Street  
Auburn, N. Y.

## *First Vice-President*

Mrs. Henry J. Noerling  
Valatie, N. Y.

## *Second Vice-President*

Mrs. H. L. Gokey  
Alexandria Bay, N. Y.

## *One Year*

Mrs. Francis R. Irving  
119 Wendell Terrace  
Syracuse, N. Y.

Mrs. Herman W. Galster  
341 Mohawk Avenue  
Scotia, N. Y.

## *Three Years*

Mrs. John L. Bauer  
984 Bushwick Avenue  
Brooklyn, N. Y.

## *Chairman of the Standing Committees*

### *Archives*

Mrs. Wm. J. Lavell  
3052 Crescent Street  
Long Island City, N. Y.

Here is where the lighter side of this meeting comes to the front. No efforts were spared by Mrs. L. M. Lally and her committee in arranging the annual banquet, musicale, afternoon tea, and tour of the Waldorf-Astoria. It seems appropriate to mention the pleasure afforded to everyone who was able to browse about an unusual collection of hobbies. The dolls exhibited were exceptionally unique. Our hats are off to all the ladies of Kings, Queens, and Nassau counties. Accept this open expression of gratitude from each and every member of our entire organization. It was a grand job!

We must not forget to mention that we were fortunate in having Mrs. Rollo K. Packard, of Chicago, National Auxiliary president, attend this convention. She was most interested in our activities and her words of counsel at our banquet still remain in our minds. She made us feel that we have a year before us in which we must strive and work to mobilize American Medicine, making the nation feel the importance of the American Doctor.

Equal to fulfilling this task is Mrs. Luther H. Kice, of Nassau, our new president. We have full confidence in her and we pledge to her our utmost assistance.

May this year be a successful one and God speed.

Officers elected for the year 1940 to 1941 follow.

## *Recording Secretary*

Mrs. J. Emmerson Noll  
19 Elizabeth Street  
Port Jervis, N. Y.

## *Corresponding Secretary*

Mrs. Louis M. Lally  
27 Verbena Avenue  
Floral Park, N. Y.

## *Treasurer*

Mrs. Carlton Potter  
425 Waverly Avenue  
Syracuse, N. Y.

## *Directors*

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Mrs. Daniel J. Swan  
141-54 Northern Boulevard  
Flushing, L. I., N. Y.

Mrs. Edwin A. Griffin  
311 Garfield Place  
Brooklyn, N. Y.

Mrs. G. Scott Towne  
150 Phila Street  
Saratoga Springs, N. Y.

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Flower	Mrs Robert F Barber	1257 Dean Street Brooklyn
Headquarters	Mrs Edwin A Griffin	311 Garfield Place Brooklyn
Hosp & Inform.	Mrs Albert M Bell	373 Sea Cliff Avenue, Sea Cliff
Hotels	Mrs George H Smith	161 Hancock Street Brooklyn
Junior Ushers	Mrs Nathaniel H Robin	106 Hilton Avenue, Hempstead
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Tea	Advisory Committee	
Tickets	Mrs Louis A Van Kleeck	29-30 Northern Boulevard Manhasset
Transportation	Mrs Paul Shuey	33-15 80th Street Jackson Heights

# Books

Books for review should be sent to the Book Review Department at 1313 Bedford Avenue Brooklyn, N Y. Acknowledgment of receipt will be made in these columns and deemed sufficient notification. Selection for review will be based on merit and the interest to our readers.

## RECEIVED

**New Facts on Mental Disorders** Study of 89,190 Cases By Neil A Dayton, M D Octavo of 486 pages, illustrated Springfield, Charles C Thomas, 1940 Cloth, \$4 50

**The Newer Nutrition in Pediatric Practice** By I Newton Kugelmann, M D Octavo of 1,155 pages, illustrated Philadelphia, J B Lippincott Co, 1940 Cloth, \$10

**Clinical Roentgenology of the Alimentary Tract.** By Jacob Buckstein, M D Quarto of 652 pages, illustrated Philadelphia, W B Saunders Co, 1940 Cloth, \$10

**Elmer and Rose Physical Diagnosis** Revised by Harry Walker, M D Eighth edition Octavo of 792 pages, illustrated St Louis, C V Mosby Co, 1940 Cloth, \$8 75

**Dermatologic Allergy** An Introduction in the Form of a Series of Lectures By Marion B Sulzberger, M D Octavo of 540 pages, illustrated Springfield, Charles C Thomas, 1940 Cloth, \$8 50

**Essentials of the Diagnostic Examination** By John B Youmans, M D Duodecimo of 417 pages, illustrated New York, The Commonwealth Fund, 1940 Cloth, \$3 00

**Practical Bedside Diagnosis and Treatment** By Henry Joachim, M D Quarto of 828 pages Springfield, Charles C Thomas, 1940 Cloth, \$7 50

**The Detection and Identification of War Gases** Notes for the Use of Gas Identification Officers First edition Octavo of 53 pages New York, Chemical Publishing Co, 1940 Cloth, \$1 50

**Compendium of Regional Diagnosis in Lesions of the Brain and Spinal Cord** A Concise Introduction to the Principles of Localization of Diseases and Injuries of the Nervous System By Robert Bing Translated and edited by Webb Haymaker Eleventh edition Quarto of 292 pages, illustrated St Louis, C V Mosby Co, 1940 Cloth, \$5 00

## REVIEWED

**A Textbook of Laboratory Diagnosis** With Clinical Applications for Practitioners and Students By Edwin E Osgood, M D Third edition Octavo of 676 pages, illustrated Philadelphia, Blakiston Co, 1940 Cloth, \$6 00

The third edition of Osgood's *Laboratory Diagnosis* differs but little from the previous editions in the form and general arrangement of the subject matter

This book is divided into two parts The first part treats the general subject matter by systems while the second part concerns itself with a detailed exposition of the more important and useful laboratory tests Each chapter is complete in itself Each system under consideration is introduced by a brief summary of its anatomy, biochemistry, physiology, and pathology This is followed by a discussion of certain procedures commonly employed in eliciting departures from the normal An attempt is made, where possible, to correlate these with the clinical symptomatology There is also an index by diseases of important diagnostic measures

The tables and plates are excellent No extensive theoretical discussions are given since that is beyond the scope of a work of this kind Sufficient discussions, however, are given to make this an excellent and most valuable book for both students and practitioners as a brief reference book of laboratory tests, their significance and applicability to particular organ systems in disease The bibliography is quite extensive and the author's index at the end of the book makes it easy to locate particular references readily

DAVID M GRAYZEL

**Fundus Atlas.** Stereoscopic Photographs of the Fundus Oculi By Louis Bothman, M D,

and Reuel W Bennett Octavo of 50 pages, illustrated Chicago, Year Book Publishers, Inc, 1939 \$17

The reviewer has always considered that atlases have very little place in the literature of ophthalmology, because the so-called classical pictures of disease are so varied in that field as to make the necessary number of illustrations impossible. It is also essential that one have a three-dimensional idea of the subject, and that one study a three-dimensional picture for interpretation A drawing or photograph may be able to supply the general impression of the condition under study but certainly refinements in diagnosis cannot be taught by this means, except in a very restricted sense. Although the fundus photography of the atlas is helpful in this sense, and though the pictures give a general impression of depth, still such useful details as the central vessel light streak and characteristic features of various types of exudate are lost Fundus photography has a recording means in certain conditions only This atlas is helpful as a basis for general review for the student in conjunction with study of clinical material

JOHN N EVANS

**Sterility and Impaired Fertility** Pathogenesis, Diagnosis and Treatment. By Cedric Lane Roberts, F R C S, Albert Sharman, M D, Kenneth Walker, F R C S, and B P Wiesner, Ph D Octavo of 419 pages, illustrated New York, Paul B Hoeber, Inc, 1939 Cloth \$5 50

Although sterility and infertility are as old as the human race itself, it is only in the last few years that outstanding progress has been made in its causative investigation and treatment This new and comprehensive book on

the subject is a valuable guide not only to the gynecologist and urologist, but also to the general practitioner whom the sterile couple first consult for their infertility. The authors are unanimous in emphasizing the absolute necessity of teamwork by the several specialists since such work alone will assure correct diagnosis and appropriate treatment.

The chapters include a general survey with a clear description of modern methods of investigation of both the male and female factors of sterility. The authors emphasize semen examination as an important factor of the male investigation, and discuss comprehensively up-to-date methods of analysis. They deal fully with sterility in the female, and describe the causative factors of infertility, endometrial biopsy study, vaginal smears and titrations of the gonadotropic and ovarian hormones, and other interpretations. The conservative evaluation of the endocrine therapy for male and female infertility is to be commended.

The point of view of the authors is best brought out in the preface by Lord Horder. The scope of the book is mainly clinical, but its emphasis throughout is on diagnosis and treatment, and should prove of value to those who are interested in this complex problem, particularly as the combined points of view emphasize the importance of investigating the couple as an entity and not as individual problems.

SAMUEL L. SIEGLER

**Chronic Arthritis.** By Robert T. Monroe, M.D. (Reprinted from Oxford Loose-Leaf Medicine.) Edited by Henry A. Christian, M.D. Octavo of 84 pages. New York: Oxford University Press, 1939. Cloth, \$2.00.

The author introduces the subject of chronic arthritis with a careful review of the anatomy and physiology of joints.

Of the intra-articular tissues synovia can react to any agent only by inflammation and cartilage only by degeneration. His choice of classification is based on these facts. He gives an excellent pathologic, clinical and differential description of chronic arthritis under three divisions: (1) atrophic type, (2) hypertrophic type, and (3) periarthritic type. Dr. Monroe finds no advantage in regrouping the cases in which hypertrophic changes occur in the atrophic type or where inflammation alters the hypertrophic joints.

The major portion of the monograph is devoted to detailed description of each type, and follows with specific suggestions for treatment. Of special value to the general practitioner is to point out the dangers and fallacies of many of the too frequently used therapeutic procedures both physical and chemical.

Illustrations are omitted without comment, perhaps wisely to make this monograph available at the moderate price of \$2.00. This encourages wider distribution to the family doctor for whom it is primarily intended.

This monograph is well recommended.

PAUL C. ESCHWEILER

**Health Officers' Manual.** General Information Regarding the Administrative and Technical Problems of the Health Officer. By J. C. Geiger. M.D. Duodecimo of 148 pages, illus-

trated. Philadelphia, W. B. Saunders Co., 1939. Cloth, \$1.50.

Drawing upon a wealth of personal experience and a fund of sound common sense, Dr. Geiger has written this small manual on public health practice. He discusses, in simple straightforward manner, various problems that currently present themselves to the health officer, whether he serves a large or small unit of population. This book should serve as a useful addition to the library of the student of public health administration.

F. L. MOORE

**The Medical Staff in the Hospital.** By Thomas R. Ponton, M.D. Octavo of 288 pages, illustrated. Chicago, Physicians' Record Co., 1939. Cloth, \$2.50.

This book is an authoritative text expounding the requirements of the governing body and the medical staff in the hospital. Dr. Ponton has had wide experience in hospital work, and his book is valuable because of his extraordinary opportunity for close study of staff problems.

In this volume the duties of the governing body and the medical staff are clearly defined and explained. The bases for the selection and appointment of the medical staff are stated clearly and concisely. Its organization and such important phases as personnel of staff, honorary, consultant, active, associate and courtesy are discussed in detail. The type and quality of meetings are discussed, and the importance of modern medical records is emphasized. An entire chapter is devoted to consideration of problems pertaining to resident medical staff, and many helpful and valuable facts are presented.

The book reads easily, the material is well presented, and the text is recommended for reading to anyone interested in hospital medical problems.

EUGENE R. MARZULLO

**The Surgery of Injury and Plastic Repair.** By Samuel Fomon, M.D. Quarto of 1,409 pages, illustrated. Baltimore, Williams & Wilkins Co., 1939. Cloth, \$15.

In the reviewer's opinion this is the best book on plastic repair that has been published to date. Thirteen hundred and ninety pages chock full of restorative material that is modern and clearly presented. At the end of each chapter a wealth of bibliographic material is found. The author has given several of the accepted surgical procedures for each restorative problem, a policy that is lacking in most books of this type. It covers restorative procedures for defects about the head and neck, and the writer promises to issue a second volume covering the trunk and extremities at a subsequent date. The first 519 pages contain a multitude of subjects pertaining to surgical details, and these pages alone are worthy of any surgeon's interest. The chapter on burns is modern and complete. The section on the nose is so thorough that it should satisfy any surgeon interested in nasal plastic repair. Sections on plastic repair of the eyelids, maxillo-facial region, lip cleft lip, cleft palate, and mandible are fully covered in the modern concepts of surgical repair—a tremendous task well done.

GERALD R. O'BRIEN

**The Neurogenic Bladder** By Frederick C McLellan, M D Octavo of 197 pages, illustrated Springfield, Charles C Thomas, 1939 Cloth, \$4 00

The reviewer feels that this particular book represents an unusually clear analysis of this very difficult problem. Every attempt has been made by the author, through the liberal use of charts and illustrations, to make the reading matter as understandable as possible.

A quotation from the author's own preface provides an excellent description of the book as a whole. "This volume is intended to give the student or diagnostician a working knowledge of the value of cystometry in the differential diagnosis between neurogenic and non-neurogenic disease of the bladder and to better understand the behavior of the bladder resulting from disease of special location in the central nervous system."

The above work has been performed on the basis of five hundred systemetric studies both in neurogenic and non-neurogenic disease of the bladder, and about two hundred of the former group have been carefully analyzed.

HAROLD R MERWARTH

**The Management of Obstetric Difficulties.** By Paul Titus, M D Second edition Octavo of 968 pages, illustrated St. Louis, C V Mosby Co., 1940 Cloth, \$10

It is too bad that an important and excellent book like this, published in 1940, should contain in the introduction a statement that twelve thousand women die annually in the United States from puerperal causes and that the maternal mortality rate has been *only slightly reduced* in the last ten years and is now 6.5 per one thousand births. As a matter of fact the Bureau of the Census figures for 1937 published in 1939 showed a rate of 4.9, 14 per cent better than 1938 (5.7). Figures for 1938 show a rate of 4.3 and less than ten thousand deaths, the lowest rate ever recorded in this country. Titus, of course, could not have seen these figures, yet published provisional statistics indicated a 10 per cent reduction for 1938.

Much more comprehensive and larger than its predecessor, it approaches the textbook in scope. The chapter on the treatment of sterility is excellent. In describing the stereoscopic x-ray method of Caldwell and Moloy and the x-ray pelvimetry of Thoms, Titus states that the simpler method of Thoms seems preferable. With this the reviewer heartily agrees. Both methods are well described. Hebeostomy or pubiotomy is fully described and approved. The popular transverse lower segment cesarean is not shown, nor is the Waters' operation which has so much merit that it may largely displace the transperitoneal operation as well as the Latzko. The operative procedures are clearly described and well illustrated. A very valuable book for the advanced student.

CHARLES A GORDON

**Shock. Blood Studies as a Guide to Therapy** By John Scudder, M D Quarto of 315 pages, illustrated Philadelphia, J B Lippincott Co., 1940 Cloth, \$5.50

Since the latter part of the last century a wealth of publications has appeared concerning the chemistry, physics, and physical chemistry of the blood and tissue fluids. From these publications the author of this monograph has compiled an extensive bibliography and made use of a definite part of these articles for diagnostic and therapeutic purposes. He recognized the importance of the changes of the potassium concentration in the body, and on this subject he conducted laboratory research and clinical investigations and, as a result, notes that the changes of the potassium concentration go hand in hand with changes in hematocrit, plasma proteins, and specific gravity of the blood. These changes are shown in numerous charts, tables, and abstracts of case histories, which will be of welcome aid to those who intend to conduct researches in this field.

EDWARD SINGER

**Gynecology, Medical and Surgical.** By P Brooke Bland, M D Third edition Quarto of 843 pages, illustrated Philadelphia, F A Davis Co., 1939 Cloth, \$8 00

The new third edition of this excellent textbook is of the same high standard as the preceding editions. It thoroughly covers gynecology in all of its medical and surgical phases and clearly illustrates and describes most of the common gynecologic operations.

To meet the ever changing concepts of the subject the author has revised much of the text. He describes and illustrates the anatomy and physiology of the female sex organs in excellent detail. In his clear discussion of endometriosis he gives the latest ideas relative to the condition. The chapter on endocrinology is particularly worthy of note.

The reader is told frankly that in many instances endocrine therapy is of great therapeutic value, but in others its usefulness is open to question. The newer concepts of x-ray and radium therapy are discussed in an exceptionally well-written chapter.

The volume is complete and concise. It is an excellent text for students and a valuable reference book for practitioners.

WM SIDNEY SMITH

**Cancer of the Larynx.** By Chevalier Jackson, M D, and Chevalier L Jackson, M D Octavo of 309 pages, illustrated Philadelphia, W B Saunders Co., 1939 Cloth, \$8 00

The book is a most complete review of the subject based on an enormous clinical experience. It describes in great detail both the diagnosis and treatment, stressing particularly the importance of early diagnosis and the selection of appropriate measures. Numerous illustrations as well as five color plates add greatly to a clear understanding of the text, and a section is added dealing with the historical aspects of various forms of treatment. The book is very complete and should be read by all in any way interested in the subject.

R L MOORHEAD

# NEW YORK STATE JOURNAL *of* MEDICINE

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VOLUME 40

JUNE 15, 1940

NUMBER 12

## *Editorial*

### Politics? or Action?

Are we a nation of cake-eaters? Or merely dream mongers? Physicians, especially the psychiatrists among us, might be able to supply the answer. Answer there must be. For we face a gravely critical period in the history of the country, a time when decisions of profound importance must be made.

These, however, must be followed by action of a sort to affect radically the lives and habits, the concepts and beliefs of the whole population. In recent years the national mind has been focussed on "social objectives." Political ambitions and lususory legislation have played with the hopes of the Dependency that the ultimate objectives of democracy were in process of attainment.

Now we face the grim and unsocial objectives of adequate preparation for defense too long delayed. The umbrella of our domestic policy of appeasement will not suffice to protect our institutions from the steel rain which threatens them, nor from the rust and corrosion from which they are now partly crippled. This time, the threat is *here*, to our soil, to the politician in Washington as well as in Albany or any other seat of government. This time, nobody escapes, be he Republican, Democrat, WPA worker, millionaire, physician, or pretzel bender. Modern war is as unsocial as that.

How far can we carry our contemplated unsocial activities without "any retreat from any of our social objectives"?\* "New forces," says Mr. Roosevelt, "are being unleashed, deliberately planned propagandas to divide and weaken us in the face of danger." These forces he calls "undiluted poison," as undoubtedly they are. But where are they being unleashed? Are any of these undiluted poisons encapsulated in the legislation purporting to advance us toward certain "social objectives"? Physicians are in contact with the results of much of it. Let them think about it, and think fast. Their

\* Fireside Chat of President Roosevelt May 26 1940



national association is under criminal indictment, their public practice of medicine is controlled and regulated, hopelessly enchained in a net of rules and regulations having the force and effect of law. Their private practices are all but undermined. Why does this moment of unsocial preparation find us so far "socialized"? Did not the President say "Our moral, our mental defenses must be raised as never before against those who would cast a smoke screen across our vision"? The medical profession has done its best in the past to raise the screen, with results as above noted, and will continue its efforts unabated, as here requested.

As a first step in this direction let us ask frankly. Will the medical profession be the political football of our defense preparations, or, for example, may we expect action upon our recommendations for revision of the medical welfare muddle? Compulsory health insurance?

### Causes of Mortality

It is a trifle ironic that we can report for the United States in 1939 a new record for low mortality from disease,<sup>1</sup> that "the year did establish a new 'best' record among an important cross section of the population—the more than 17,000,000 wage earners and their dependents who are industrial policy holders. Particularly encouraging," says the *Bulletin*, "were the continued improvement in infant and maternal mortality as well as from tuberculosis and pneumonia. It is assured that new low rates were reached for all these causes of death in 1939."

In Europe, during the same year, exponents of "Man's inhumanity to man" were plotting and accomplishing the death and destruction of countless thousands, scattering and dispersing countless other thousands "ill fed, ill clothed, ill housed" to the ends of the earth. And now, in 1940, every resource of modern technology is being utilized to continue the work on an ever grander scale of butchery, until the continents of Europe and Asia shall become one seething slaughterhouse, conducted by maniacs.

Perhaps, if the figures were known, this system of reducing mortality from disease by killing people with bombs and guns, especially the young ones, is effective. Infant mortality can certainly be reduced by blowing the expectant mothers to atoms before the infants are born. And the diseases of childhood can be avoided altogether by destroying the children before they have contracted them. Young adults and the aged can be similarly helped.

To our American way of thinking the system seems a little harsh. We admit the desirability of exterminating the diseases, but main-

<sup>1</sup> Met. Life Ins. Co. Statistical Bulletin Vol. 21 No. 1 (Jan.) 1940

tain that the "horse and buggy" method of private practice by well-qualified physicians, together with efficient public health departments can accomplish the same ends, perhaps less spectacularly, but in the long run more efficiently. What do you think?

## Workers' Health Hazards

The report of the Commissioner of Labor to the Legislature in March, 1940, reveals the progress which has been made in the detection and control of silicosis and other occupational diseases in the three and one-half years from July 1, 1936. The Legislature then appropriated the sum of \$50,000 a year for five years to the New York State Labor Department. The funds were allocated to the Division of Industrial Hygiene.

Procedures were devised to include medical examinations of workers, chemical analyses of rock and other substances to determine the amount of hazard-producing material, together with methods of control. As a result, the Commissioner reports that "the health of nearly 300,000 workers in dangerous trades in New York is safer than it was three and one-half years ago. Industrial hygiene doctors have conducted 37,850 medical examinations, including x-rays, medical, occupational and physical tests, blood and other analyses, and skin patch tests. There have been 17,229 chemical analyses and determinations of samples of air, rock, blood, lung tissue, and other substances.

"During the three-and-one-half-year period, 4,808 plans for ventilating systems and other methods of controlling dusts and fumes have been examined by industrial hygiene engineers. These plans involve 23,446 machines and protect 39,317 workers. Specifications have been developed for wet and dry drills and exhaust equipment to be used in rock-drilling operations. This equipment had to be tested preliminary to official approval."

Something has been learned about the control of hazards generated with the speed of invention, the development of new industries, new chemicals, new processes which bring in their wake new poisons and new uses for old ones. A ventilation laboratory has been especially designed and equipped, by the use of which the industrial hygienists may assist an employer to devise exactly the ventilating system for his particular plant.

Dusts, sometimes called "noninjurious," such as wood, cement, talc, and wool have been to date insufficiently studied, too few data exist to warrant any such assumption. Further, the increasing use of solvents for nitrocellulose, as degreasing agents, as thinners in lacquers, are creating unexpected problems. It has been found

that these solvents may attack the body fats of workers, particularly the fats of the nervous system, to mention but one instance

The work of the Division of Industrial Hygiene deserves the wholehearted support of the medical profession. Inevitably, the anticipated speed-up of manufacture, related to the defense program, new products and processes, the increased employment of new workers unused to the hazards of industry, will create extraordinary problems. These developments will necessitate new safety codes, more intensive study of industrial poisons, and above all an increased program of education in safety.

### Medical Preparedness

The state of Europe has forcibly reminded us of the readjustments necessary to adapt a large civilian population to the economy of war. The medical profession, in time of war, has thrust upon it suddenly, problems which do not ordinarily exist, and it, too, must readjust itself to meet them. War medicine and war surgery require special organization, centers for research must be established so that the biology, pathology, and treatment of war wounds and other conditions can be studied. The war in Spain has given us many basic ideas concerning prophylactic excision, preoperative transportation, and immobilization by means of plaster casts for all wounds of the extremities.<sup>1</sup>

Then, too, the manner in which war is waged today has so far been vastly different from the World War. This difference raises the question whether the means for administering medical care and evacuation to the rear, which were in use twenty years ago, will suffice in this newer method of warfare. In the realization that our country must now embark upon a vast program to prepare ourselves, the medical aspects of war assume an important place in the minds of civilian physicians who, in an emergency, will be called upon to bear the brunt of the work, under the supervision of trained army and navy medical personnel. It would seem in order, therefore, that some means be made available to keep doctors informed of current war medicine as part of the preparedness program, and that it be done as soon as possible.

<sup>1</sup> Jeanneney G. *Gaz d hôp* 113 177 (March 6) 1940

### Current Comment

"As a matter of fact, there is not a particle of difference between true propaganda and education. Education is propaganda. If you learn the multiplication table, it is propaganda that two and two

do not make five, and it is very important that the fact should be grasped"—Nicholas Murray Butler, speaking on "The Real Issue" at the annual meeting of The Pilgrims on January 24, 1940

# BIN INSULIN

## ical Study

E B ANDREWS, M D , and WILLIAM A GROAT, M D , Syracuse, New York,  
ie assistance of ALICE V WOOD, B S , and MEREDITH L JONES, B S

*he Medical Department, Metabolic Service, and Hazard Memorial Laboratory, Syracuse  
Memorial Hospital)*

HAVE had globin insulin for inves-  
tigational use to study its effect on  
diabetes mellitus\* Globins are  
quite similar to protamines except  
ey have a larger number of amino  
the molecule The globin used in  
ulin product is said to be obtained  
ef The best known of the glo-  
of course, hemoglobin The prepa-  
of globin insulin used in our work  
ear, slightly yellowish fluid, which  
o contain 3.8 mg of globin and 0.3  
zinc per hundred units of insulin<sup>1</sup>  
ulin concentration was 80 units  
ic centimeter, pH of 4.0 Due to  
1 concentration of insulin units, a  
lin syringe was used to measure  
e This study comprises cases in  
ison with the modified insulins,  
ne zinc and crystalline zinc, of  
d character

ian<sup>1</sup> has reported a study of 25  
Reiner, Searle, and Lang<sup>2</sup> re-  
a series of studies upon animals  
ral, our observations are similar  
e of Bauman To test the ef-  
of a new insulin, it seemed to  
advantageous to make our blood  
eterminations two hours after  
the three meals We planned in  
y to catch the peak of blood sugar  
ther than the low point. In  
dy, two sets of blood sugars of  
eterminations each were taken  
the control or observation period  
ie patient was taking his former  
insulin When clearly on globin  
or at least two days, three deter-  
ns each were similarly carried out.  
thod used for collecting and proc-

essing venous blood is a sound, simple  
microchemical one, which will be reported  
separately All determinations have  
been in duplicate with frequent careful  
titers and checks of the solutions, all by  
standard methods

A summary of the detailed study of 10  
representative cases is given Table 1  
indicates the type of insulin with blood  
sugar curves and urine findings on a par-  
ticular day during the control period,  
Table 2 the same while receiving globin  
insulin, Table 3 the distribution of car-  
bohydrate according to the three or four  
feedings that were used and to the par-  
ticular insulin the patient was taking the  
day he was fed this amount of carbohy-  
drate The first half shows the control  
period with supplementary feeding at  
10:00 P M During the period the patient  
was on globin insulin, the carbohydrate  
in the various meals was reapportioned  
from time to time to get what seemed to  
be the best control with a single dose of  
globin insulin given before breakfast, the  
total carbohydrate in twenty-four hours  
remaining constant. It was usually  
found in giving this single dose of insulin  
before breakfast that a good proportion  
of the total carbohydrate should be  
given at the noon meal A light feeding  
at 4:00 P M for the active individual seems  
to be the rule

We have noticed that when shock ap-  
peared it was mild and occurred usually  
about 4:00 P M A sense of weakness and  
chilliness was the usual complaint, rarely  
with other symptoms of hyperinsulinism  
such as hunger, palpitation, sweating, etc  
In these few instances the chilliness did  
not seem to leave for an hour after  
other symptoms had disappeared

gh the courtesy of The Experimental Research  
es of Burroughs Wellcome & Co. who furnished  
insulin

blood pressure was 134/72. Routine urinalysis revealed a large amount of sugar. He was put on a dietary of carbohydrate 190, protein 80, and fat 100. He was stabilized on 44 units of protamine zinc insulin and then shifted to 40 units of globin insulin without incident.

*Case 3*—Woman, aged 28, had been a moderately severe diabetic four years. Now she is able to carry on active professional nursing. She responds much better to globin insulin than she did to protamine zinc insulin, 40 units of globin insulin being more effective than 50 units of protamine zinc insulin.

*Case 4*—Woman, aged 56, was admitted January 6, 1940, for shortness of breath and swelling of the ankles. She had cardiovascular disease as a complication, blood pressure of 250/120. Her blood sugar on admission was 360 mg. She was fairly well stabilized on 30 units of protamine zinc insulin. Her dietary was carbohydrate 150, protein 60, and fat 70. Carbohydrate was divided as follows: 30 for breakfast, 50 for lunch, 50 for supper, and 30 for late supper. She was stabilized on this dietary with 20 units of globin insulin.

*Case 5*—Boy, aged 18, was admitted to the Syracuse Memorial Hospital on September 7, 1939, in diabetic coma. During the past year he had complained of weakness and had lost fifteen pounds in weight. For two years he had had increased hunger and thirst and swelling of feet and ankles for past six months. The day before he was admitted he vomited several times and had shortness of breath. Father's brother had diabetes and the patient had a nephew who died at one and one-half years with diabetes. Blood sugar on admission was 454 mg. Urine showed sugar 5 and acetone 3 plus. With customary intensive treatment with regular insulin clyses and infusions, he was discharged September 21, 1939, weighing 144 pounds and taking 60 units of protamine zinc insulin. He complained of tingling and pain in his feet at this time but refused to remain longer in the hospital. He was readmitted November 15, 1939 for further observation. There were symptoms that suggested peripheral nerve involvement. He had reduced vibratory sense and diminished tendon reflexes in the legs. He was seen by a neurologist who stated that he had a peripheral rather than cord involvement. Large doses of vitamin B combinations did not produce any immediate effect. In outpatient clinic he did not seem to do well on protamine zinc insulin and so was shifted to crystalline zinc insulin which was gradually increased to 64 units before breakfast and 40 units before supper, a high total of 104 units of crystalline zinc insulin daily. He got

along very nicely on this with dietary carbohydrate 150, protein 80, and fat 90. His carbohydrate distribution as an outpatient was 40 grams at breakfast, 40 grams at lunch, 60 grams at the evening meal, and a late feeding of 10 grams. He was admitted again April 15, 1940, for observation. At this time his reflexes were normal and his vibratory sense was practically normal. Dietary changed to carbohydrate 200, with the same daily total amount (104 units) of crystalline zinc insulin. After two days he was changed to globin insulin, 60 units before breakfast. Two days later he was given 70 units of globin insulin, and it can be seen from Table 3 that his blood sugar was practically normal on this dose. His weight April 24, 1940, was 161 pounds and patient was well controlled on one dose of 70 units of globin insulin.

*Case 6*—Woman, aged 43, was admitted to the hospital on February 25, 1940. Seen first December 10, 1935, by reference of Dr. Hoople. She had been referred to him because of difficulty in breathing and the possibility of chronic suppurative maxillary sinusitis. This proved not to be true, but he noted that there seemed to be some decided metabolic disturbance. The patient in the hospital was found propped up, decidedly air hungry with cherry red face and lips. She had had good appetite without nausea and vomiting but had lost weight. While seemingly clear, she was noticeably psychoneurotic, very apprehensive, and a difficult problem for the nurses. Large amounts of sugar and acetone were found in the urine, high blood sugar, etc., and she required large doses of regular insulin for several days with marked personality changes to normalcy. As a diabetic she was quite unstable and later was put on 40 units protamine zinc insulin but remained unstable, showing large amounts of sugar at times and having frequent prolonged shocks in the early morning hours. Because of this sugar shock sequence she reentered February 25, 1940, although apparently in good condition otherwise. Following the usual procedure she left the hospital on 40 units of globin insulin and is maintained without shocks and mostly sugar free.

*Case 7*—Man, aged 40, was admitted June 26, 1932, for diabetes, with increasing thirst, frequency of urination for two months, weakness, and weight loss. Two years ago he weighed 190 pounds and on admission 135 pounds. On his first admission he was discharged, taking 16 units of insulin. Patient was in and out of the hospital for several years. He was readmitted in 1936. At that time he had a keratitis. There was complaint of gastric distress, but x-ray examination and test meals

showed nothing helpful. He was in the hospital many weeks and was difficult to stabilize taking 60 units of protamine zinc and 20 units of crystalline zinc before breakfast. On his latest admission he was given divided doses of crystalline zinc insulin, 36-36-36, without satisfactory control. He was put on a dietary of carbohydrate 210, protein 70, and fat 80 and then shifted to 80 units of globin insulin. For the last two months he had been very well controlled and has kept his weight at 155 pounds.

*Case 8*—Man, aged 38, was admitted for circumcision. Routine urinalysis showed 4 sugar, no acetone. Blood sugar was 247 (before breakfast). Stabilized on 36 units of protamine zinc insulin on a dietary of carbohydrate 240, protein 100, and fat 100. He was discharged on 30 units of globin insulin and is well controlled at present.

*Case 9*—Woman, aged 38, was admitted March 23, 1940, on gynecologic service for perineal repair. She was found to have diabetes. She was spilling a large amount of sugar and had a fasting blood sugar of 182 mg. It was decided to omit any operative work as Ascheim-Zondek test showed pregnancy, and she was put on a dietary of carbohydrate 150, protein 70, and fat 60. She was given crystalline zinc insulin, 16 units in the morning and 16 at night. Carbohydrate was divided 40-50-60. She was then changed to 24 units of globin insulin and was discharged March 18, 1940, well controlled.

*Case 10*—Man, aged 58, was admitted January 27, 1940. He had had tarry stools for two days and a history of diabetes of twelve years' duration. Careful study revealed no gastrointestinal pathology. His condition improved when the diabetes was brought under control. He was stabilized first on 80 units of protamine zinc insulin and was given a dietary of carbohydrate 200, protein 80, and fat 150. High fat was due to milk and cream between meals, the patient being on a modified Sippy diet. This patient was a difficult case, but with a very large carbohydrate feeding at noon, he left the hospital under excellent control on 78 units of globin insulin.

## Discussion

We have been able to make the following observations: (1) The daily total units of globin insulin necessary for control seems to be less than the daily total units of protamine zinc insulin previously used. (2) Patients were well controlled by diet and a single daily dose of globin insulin even when it had not been ac-

complished in severe cases of diabetes by crystalline zinc or protamine zinc insulin. (3) None had nocturnal hypoglycemic reactions except in one instance, when we used a dose of globin insulin before the evening meal. On discontinuing this second dose of globin insulin, the reaction at 11:00 P.M. was avoided. (4) In shifting from protamine zinc to globin insulin in 2 instances we had slight insulin shocks on the morning the change was made, indicating the frequently observed fact that protamine zinc insulin is effective beyond twenty-four hours. In changing from protamine zinc to globin insulin, we found that the day the change is made it seems best to give half as much globin insulin as had formerly been given of protamine zinc insulin. The next day one can increase the dose of globin insulin to about three-quarters of the previously given dose of protamine zinc insulin. This dose will often be found sufficient to maintain satisfactory control. (5) A patient newly on globin insulin should be closely watched since the daily total dosage should likely be reduced until a stable adjustment is reached. It is not, however, truly cumulative in action. (6) When using protamine zinc insulin, we have customarily given a total carbohydrate, usually 150 to 200 grams or more, depending on the weight of the patient, divided as follows:  $\frac{2}{10}$  for breakfast,  $\frac{3}{10}$  for lunch,  $\frac{1}{10}$  for the evening meal, and  $\frac{1}{10}$  for late feeding.<sup>3</sup> However, in the use of globin insulin, in our experience it is best to give the larger amount of carbohydrate at the noon meal if the insulin is administered before breakfast. Dividing the total carbohydrate into tenths, we would be likely to give  $\frac{2}{10}$  for breakfast,  $\frac{1}{10}$  for noon meal,  $\frac{1}{10}$  for four o'clock lunch, and  $\frac{3}{10}$  for the evening meal. The protein and fat may be reasonably divided to suit individual custom. In our experience, judging from blood sugar curves, the timing of the occasional mild insulin shocks, and the occurrence of sugar in the divided urine specimens done daily, patients tend to get the maximum effect of globin insulin in about eight hours.

The effect of the globin insulin appears to last about fifteen hours. In 3 of our severer cases (patients taking at least 80 to 90 units of insulin often without good control), we were able to establish a much more successful control with globin insulin than with protamine zinc or crystalline zinc insulin, with satisfactory weight adjustments when required.

From this brief experience we feel that globin insulin has a distinct advantage over crystalline zinc or protamine zinc insulin, particularly in the severer types of diabetes.

Stimulated by the researches of Housay, a great deal of fundamental information has been accumulated on the interrelations of ductless glands and their relation to diabetes.<sup>4,5</sup> The production by Young of permanent diabetes in animals with pituitary extract injections ranks with the work of Minkowski.

However, the application of animal experiments to human diabetes is still to be worked out, and we are confronted by the problem of making the best use of well-established methods of treatment. For the average physician the treatment is still educational, teaching the patient how to regulate and measure his diet, advising him in detail about his insulin, and regulating his work and his play so that in spite of his defect he may be assured a useful and happy life.

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### CANCER LITERATURE DISTRIBUTED BY SOCIETY

The American Society for the Control of Cancer, Inc., 350 Madison Avenue, New York City, will send upon request from a physician any or all of the following reprints. There is no charge for this.

- No 40 CANCER OF THE BREAST by Arthur H Estabrook, Ph D—an eight-page reprint from the 'Trained Nurse and Hospital Review,' Jan., 1939, with photographs showing steps in the radical surgical operation for breast cancer.
- Re. 1 BIOPSY IN MAMMARY CANCER by James Ewing, M D—two-page reprint from the *Bulletin* of the American Society for the Control of Cancer Jan. 1933. A plea for proper methods of biopsy.
- Re. 4 THE DOCTOR'S PRACTICAL RELATION TO THE CANCER PROBLEM, by William Carpenter MacCarty M D—a five-page reprint from the *Bulletin* of the American Society for the Control of Cancer, May 1933. Points on prognosis.
- Re. 6 THE RESPONSIBILITY OF THE PRACTITIONER IN MENOPAUSAL BLEEDING by James E King M D—three-page reprint from the *Bulletin* of the A S C C, July, 1932.
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- Re. 8 THE FAMILY PHYSICIAN'S PLACE IN THE CONTROL OF CANCER OF THE UTERUS, by S W Cathcart, M.D.—three-page reprint from the *Bulletin* of the A S C C, Nov., 1933.

- 2018 TRANSILLUMINATION OF THE BREAST by Max Cutler, M D—16-page reprint 1933. On the use of transillumination as a confirmatory aid in diagnosis.
- 2019 CANCER OF THE BREAST, by Grantley W Taylor M D F A C S reprinted from the *International Abstract of Surgery* July, 1932. Prepared at the request of the Comm on the Treatment of Malignant Diseases, Amer Coll of Surgeons. Twenty-four pages. Review of methods of diagnosis, treatment, and results. Bibliography.
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- 2021 RADIOSENSITIVITY OF TUMORS, by Fred W Stewart, M D reprinted with addition from the *Archives of Surgery* Dec 1953. Eighty-eight pages. A technical presentation of special interest to radiologists.
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# MANAGEMENT OF VARICOSE VEINS IN PRIVATE PRACTICE

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SINCE the general practitioner is the first to see the patient, it is important that he be proficient in the correction of varicose veins, for upon his skill and experience the patient's health depends. Treatment of varicose veins is simple and effective and hence may unhesitatingly be advised in the early stages, so as to avoid disabling complications such as varicose eczema, ulcer, phlebitis, and embolism. Instead of waiting until the patient presents himself for treatment of his varicosities only, prophylactic treatment should be encouraged if these are observed during a routine examination. Though the treatment is quite popular, many patients still believe their condition permanent and are surprised to learn that their varicose veins can be corrected.

Every patient undergoing treatment for an associated disease should be examined for the presence of varicosities, and if these are found, no matter how slight, their correction should be suggested. It is gratifying both to patient and physician to observe varicosities resembling a small bunch of grapes or plums slowly disappear after the use of the proper amount of sclerosing solution and compression and to note the disappearance of a long standing varicose eczema with its distressing pruritus or the healing of an old varicose ulcer after obliteration of the offending veins. A patient of mine with dermatitis hemostatica and chronic psoriasis of the lower extremities, confirmed by biopsy at a large skin clinic, was treated locally for this skin lesion without any improvement until the underlying varicosities were obliterated.

Every practitioner capable of giving an intravenous injection is able to inject varicose veins. However, one rule of safety must be observed: first, ascertain

that there are no contraindications to obliteration of the varices, and, second, start slowly and with caution.

## Preventive Treatment

Until recently, treatment was suggested only when the patient complained of pruritus, burning, aching, fatigue, heaviness, and edema of the extremities and when the varicosities were of sufficient size and number to warrant the use of sclerosing solutions. Today, my opinion is that the correction of varicosities is justified even when there are no subjective symptoms. After treatment, these patients state that their legs feel lighter, that they can walk farther without undue fatigue, and are rather surprised not to have noticed their previous discomforts. Treatment of the varicosities should, therefore, not be postponed until there is manifest disturbance or actual disability but should be undertaken as a prophylactic measure.

## Recurrences Following Injection Treatment

When suggesting injection therapy, the patient should be advised of the possibility of recurrences and the importance of periodic re-examinations. The need of correction of new varicosities as soon as they appear should be stressed so that the previous abnormal state is not reached.

If ligation is indicated, the patient should be advised that the combined treatment of ligation of the great saphenous vein and the injection of the varicosities will minimize the possibility of recurrences. It is well known that, even with this combined procedure, recurrences from collateral channels of the superficial systems of veins may develop. With this treatment the incidence of recurrences has



been reduced from about 60 to about 15 per cent, and when recurrences do take place, they are usually delayed and the varicosities less numerous. It is apparent from the reports of various authorities that the advantages of the combined ligation and injection of the saphenous vein have now been generally accepted.

Assurance should be given to the patient that the operation is a simple procedure and that the number of subsequent injections necessary for complete obliteration is often less than one-half the number of injections required in similar cases without ligation. Quite frequently the patient will refuse the ligation but will submit to injections only. In such instances, treatment should not be withheld. The patient, having been convinced of the advantage of treatment, may later accept ligation to ensure more permanent results. Thus one avoids discrediting the merit of this treatment and retains the confidence of the patient.

#### Indications and Contraindications to Active Treatment

After a detailed history, minutely investigating the complaint of the patient with special reference to postoperative or postpartum phlebitis, such as phlegmasia alba dolens, a general physical examination and urinalysis should be made. In advanced age, senility, or in the presence of debilitating conditions with short life expectancy, a conservative treatment should be employed. Associated conditions, such as uncontrolled diabetes, cardiac failure, severe anemia, exophthalmic goiter, should be corrected before treatment is begun. Other conditions, such as the menopausal syndrome, prostatitis, or skin conditions, can be treated simultaneously. Pregnancy does not contraindicate active treatment, but delay is preferable, as treatment may not prevent recurrences even before parturition. Moreover, in the majority of pregnant women, varicosities diminish to such a degree that little, if any, active treatment is required. When injection treatment of

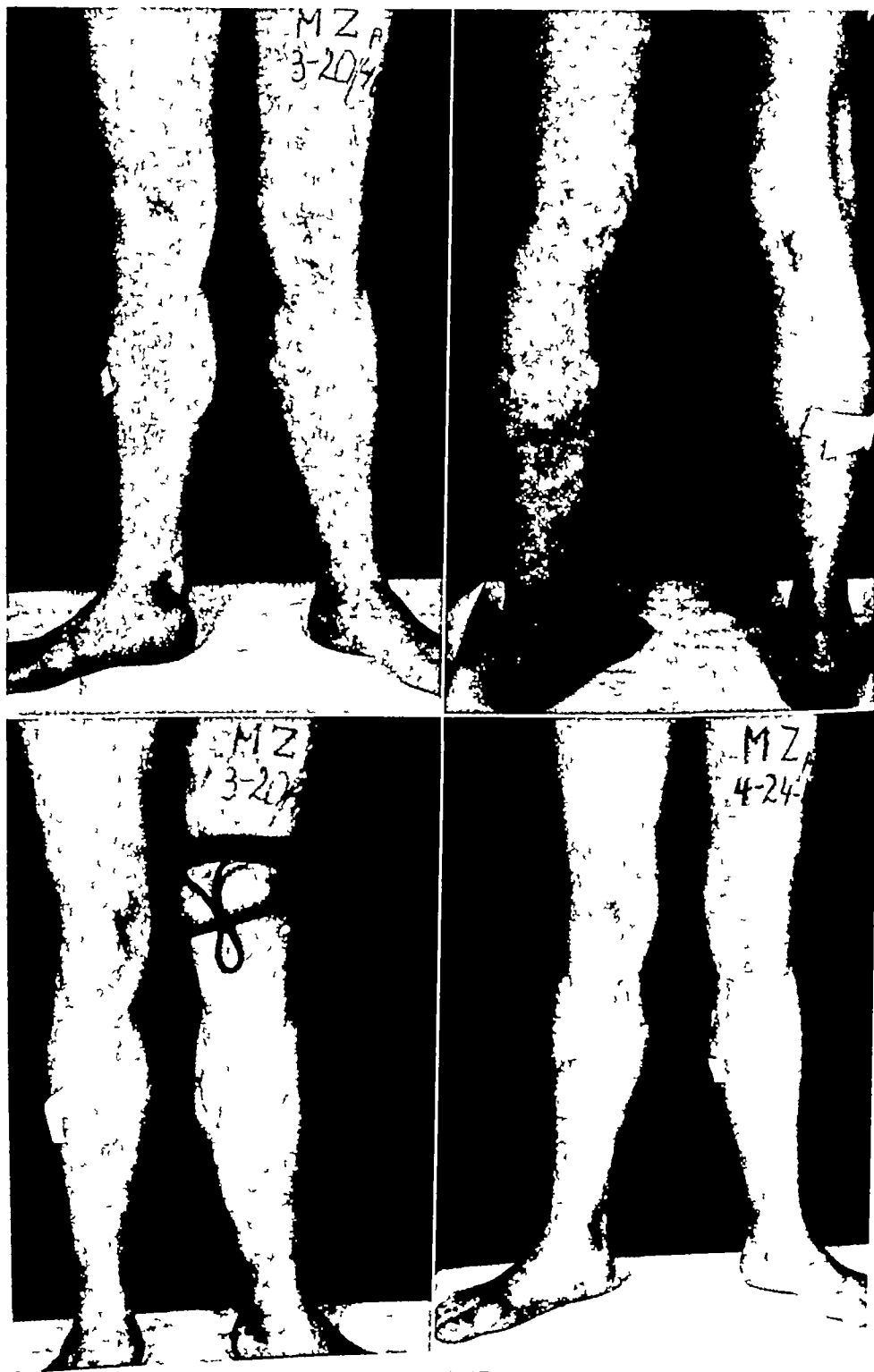
varicose veins during pregnancy is undertaken, it should be limited to the larger abnormal veins which cause pain, discomfort, or appear to be on the point of rupturing.

In deciding upon the advisability of treatment the physician should rule out local circulatory disturbances and the presence of other conditions that would contraindicate treatment. Obstruction to venous flow, such as the presence of a pelvic tumor, should be looked for. Advanced arterial deficiency, either arteriosclerosis or thromboangitis obliterans, would contraindicate the use of sclerosing solutions.

A history of intermittent claudication should make one suspect the presence of peripheral arterial disease. To confirm it, the presence of plantar blanching on elevation, rubor on dependency, diminished temperature, and the patency of the dorsalis pedis and posterior tibial arteries should be looked for. Oscillometric recordings help to indicate the state of patency of the entire vascular bed. In doubtful cases of patients past middle age, a consultation is advisable before sclerosing the veins.

The presence of phlebitis in the deep veins is an absolute contraindication to injection treatments, as the resulting obstruction of the deep venous flow generally produces a compensatory dilatation of the superficial venous system. The obstruction will usually disappear in six to eighteen months, after which period careful treatment of the varicosities may be instituted. It is, therefore, of greatest importance to determine the patency of the deep venous system.

As a matter of short review it may be stated that the greater volume of the blood from the lower extremity returns by way of the deep veins. It is from the superficial veins of the leg that varicosities develop, especially from the internal or long, external or short saphenous veins and their tributaries, and from the superficial veins of the anterior, posterior, and mesial surfaces of the leg and thigh. Numerous tributaries, normally not noticeable, may develop into medium- or



FIGS 1A-1D

**large-sized varicosities** There are frequent varicose anastomoses between the external and internal saphenous system. The communicating veins are short vessels, connecting the deep and superficial venous systems. Normally, the flow of blood is directed from the superficial veins to the deep system of veins.

### Tests to Evaluate the Circulation in the Venous System of the Lower Extremity Affected by Varicosities

There are various tests to determine the state of venous circulation in the lower extremities. Of these, Perthes', Brodie-Trendelenburg's, and the recent comparative tourniquet test of Mahorner and Ochsner<sup>1</sup> are the most widely employed.

#### Perthes' Test

The Perthes test to establish the patency of the deep venous system consists of applying a tourniquet to the patient's thigh tightly enough to compress the internal saphenous vein. The patient then walks rapidly, and if the varicosities diminish, the communicating and deep veins are known to be open. However, if the deep venous system is obstructed, the superficial veins will become more prominent, and the patient will complain of distress in the extremity. Another test is to bandage the leg from ankle to knee joint with an Esmarch rubber bandage and then have the patient walk for two hours. If no discomfort is felt, the deep veins are open. However, should obstruction be present in the deep system, discomfort and pain proportionate to the degree of obstruction will appear. If the occlusion is complete, the patient will be able to wear the bandage for a short period of time only.

### Trendelenburg's Test

The Brodie-Trendelenburg test determines the competency of the valves of the saphenous and communicating veins. With the patient in the recumbent position, the leg is elevated until the veins are emptied, and a tourniquet is applied near the fossa ovalis. The patient then assumes a standing position, and the tourniquet is rapidly released. If the veins distend immediately from above, it indicates retrograde flow of blood in the great saphenous vein and incompetency of its valves. This is the positive Trendelenburg test, and there is little danger of emboli from injecting such a vein.

The same test may be used to determine the competency of the communicating veins. If the tourniquet is applied as before and the patient then assumes a standing position, it requires thirty-five or more seconds for the varicosities to distend. The blood has passed through the normal channels of the capillaries, and the valves of the communicating veins are competent. Should the varices fill in less than thirty-five seconds, it indicates that blood, unable to return to the great saphenous vein because of the tourniquet, has returned, totally or in part, by way of the communicating veins with incompetent valves. Accurate information as to the competency of the valves in the communicating veins is necessary to insure good results.

### Mahorner-Ochsner Comparative Tourniquet Test

The comparative tourniquet test devised by Mahorner and Ochsner<sup>1</sup> is more reliable for the determination of the circulation in varicose veins. For this test, the patient walks to and fro in front of the

FIGS 1A-1D (OPPOSITE PAGE)

FIGS. 1A and 1B. Front and back view—before treatment. Extensive varicosities on the left leg with incompetency of the valves both in the communicating and great saphenous system. Some medium sized varices on the right leg. 1C. Combined Mahorner-Ochsner and Cooper<sup>2</sup> test. The persistence of prominent varicosities between the two tourniquets locates the area of retrograde flow from the deep to the superficial system. Note disappearance of the varices below the distal tourniquet. 1D. After treatment. Twelve injections resulted in obliteration of all the varicosities. Adequate compression and support helped to minimize swelling and pain and keep the patient ambulatory throughout treatment.

observer with the lower extremities fully exposed and illuminated by light coming from behind the observer. Even without a tourniquet, the varicosities become less prominent when the patient is walking, as the muscles exert a pumping action on the deep veins, thereby aiding the emptying of the superficial veins. A tourniquet is then applied around the upper third of the thigh, tightly enough to obstruct the return venous flow in the superficial system of veins including the great saphenous vein. The patient again walks at the same speed. The physician compares the prominence of the varicosities before and after the application of the tourniquet. The same procedure is employed, applying the tourniquet around the middle third, and then around the lower third of the thigh.

The interpretation is as follows. If a maximum diminution in size of the varicosities occurs when the tourniquet is around the upper end of the internal saphenous vein and if there is no further improvement when the tourniquet is around the middle or lower third of the thigh, the valves of the communicating veins are competent, and the only source for retrograde flow is through the main opening of the internal saphenous vein into the femoral vein. In this case, high ligation alone is sufficient. If there is additional improvement, manifested by less prominence, with the tourniquet around the middle third of the thigh and still greater improvement with the tourniquet around the lower third, it indicates that the tourniquet is below the lower communicating veins with incompetent valves. In this instance, high ligation alone will be insufficient, and ligation, to be effective, should be below the communicating veins with incompetent valves. Therefore high and low ligation is indicated to reduce the incidence of recurrence. There never is less prominence of the lower varicosities with the tourniquet around the upper end of the internal saphenous than when the tourniquet is around the middle or lower third of the thigh. The interpretation of the Mahorner-Ochsner tests depends upon the degree of prominence of only

those varicose veins that are below the level of the tourniquet (Figs 1A-1D).

### Sclerosing Solution and Amount of Solution to Be Used

The question most frequently asked is "What is the best sclerosing agent?" This is to be expected, in view of the great number of solutions. Moreover, every manufacturer extols the superiority of his product. Any solution that has no general toxic reaction and produces effective thrombosis by destroying the intima on contact is a good solution. Phenol, bichloride of mercury, Preg's iodine solution, and mercuric iodide have long ago been eliminated as injection agents because of their dangerous reactions.

A question less frequently heard but of greater importance is "How much of the sclerosing solution should be used?" Especially for the first few injections, safety lies in the proper dosage. Experience has taught us to start with a very small initial dose of 0.5 to 1 cc. of invertose 60 to 75 per cent or 0.1 to 0.25 cc. of sodium morrhuate 5 per cent, gradually increasing the amount in proportion to the reaction to the previous injection and later regulating the dosage to the size of the varicosity to be injected. It is neither necessary nor desirable to obtain occlusion with the first two or three injections. Slow procedure is advisable to avoid unnecessary pain and alarm, and the physician is not annoyed by night telephone consultations. Too often patients are heard to complain of having been bedridden for days and even weeks after the initial injection. These patients will dissuade their friends from such a "dangerous experience" and bring a fairly safe method of treatment into disrepute. One such experience was that of a young physician who, following the package literature suggestions, used 2 cc. of quinine and urethane as an initial dose. As a result, the patient suffered massive occlusion of all the superficial varicosities and a swollen leg, and the physician made numerous visits to the bedside of the patient, with nothing more to offer for relief than a prayer for speedy recovery.

Quinine is a strong irritant and therefore is unsuitable for initial injections. It may be employed only when the use of weaker irritants, such as sodium chloride 20 per cent or sodium morrhuate 5 per cent, has failed to produce the desired results. Starting with a small dose of a weak irritant solution is important, because a large percentage of patients with varicose extremities, as noted by Biegel-eisen,<sup>2</sup> have infected veins. The infection may be latent, chronic, or sub-acute, and the use of a large initial amount of sclerosing solution may result in massive occlusion of the varicosities with a severe degree of local and general discomfort.

### Injection Treatment in the Presence of Phlebitis

Phlebitis or thrombophlebitis in varicose veins is evidenced by pain, tenderness, swelling, and slight induration. Thrombosis may precede or follow phlebitis. At times there is increased surface temperature, and in severe cases fever and redness are present. It has been observed by many that upon subsidence of an acute process of thrombophlebitis there is improvement in the condition of the varicosities, probably due to a state of immunity acquired by the patient. This immunity can be produced by injection of small repeated doses of weaker irritants, thus causing a mild acute thrombophlebitis in patients with latent thrombophlebitis. The inflammatory reaction to the irritant in the phlebotic vein is often delayed for five or more days and may occur in distant, noninjected varicosities or along the course of the injected vein. Therefore the presence of latent or sub-acute phlebitis is no longer a contraindication to injections if such treatment is carried out slowly and carefully. The initial injection will produce a mild phlebotic reaction, but as one proceeds with increasing doses, the reaction will be similar to that in the nonphlebotic varicosities. Thereafter one may employ gradually increasing amounts of stronger irritants.

In case of extensive acute phlebitis it is advisable to delay treatment until the

process becomes quiescent. When there is a history of postoperative or postpartum phlebitis (phlegmasia alba dolens) of one extremity, I begin by injecting the varicosities of the nonaffected leg, using mild irritants for the initial injection, and only after some lapse of time is the affected leg treated. It has been my experience that varicosities in a previously involved extremity will react favorably to much smaller amounts of the sclerosing agent than the varicosities of similar size in the nonaffected leg. It may be a safer procedure first to inject varicosities of the leg before sclerosing those situated on the thighs. In case there is a thrombophlebotic reaction, spread of emboli into upper structures is less likely to occur. After obliteration has safely begun, the amount of sclerosing solution to be used depends upon the size of the varicosity.

### Allergic Reactions

The possibility of an allergic reaction should be borne in mind, and a change to a different solution should be made at the first sign of sensitivity. Small initial doses help to avoid severe allergic reactions. A variety of such reactions following the use of sclerosing solutions has been described by various authors. The reaction, as shown by Smith,<sup>4</sup> may produce an erythema of the extremity or of the entire body and may persist over a period of time. Severe allergic reactions are probably caused by a marked idiosyncrasy to the sclerosing solution, and collapse may be due to the sudden entrance of the solution into the general circulation. Some shock generally accompanies the injection in allergic patients, varying in degree from a mild fainting spell to a deep surgical shock. Recovery usually follows rapidly. When surgical shock occurs, the systolic blood pressure drops, and the pulse is barely perceptible and at times even imperceptible. Recovery usually follows rapidly.

When injection treatment has been interrupted for a period of several weeks or is undertaken for the correction of recurrences, a new sclerosing agent should be employed, as sensitivity to the former

drug may have developed during the interval. If the use of the previously employed agent seems preferable, the same small initial doses must be used.

Pulmonary infarction, mentioned in the literature as another complication, may occur from the fifth to the twentieth day after the injection. The symptoms depend upon the size and location of the infarct.

### Technic of Injections

For the injection of smaller varicosities, I prefer to have the patient stand so the varices become more prominent. In medium-sized varicosities, the sitting posture is preferable, unless the site of the varicosity does not permit this, for in the sitting posture the prominence of the varicosity will be diminished and a less protruding thrombus will result. Large-sized varices are best injected with the patient lying down. A tourniquet is applied above the varicosity, the needle is inserted, the tourniquet is removed, and the injection is made into a collapsed vein. Quite often the use of the tourniquet may not be necessary. After the varix has been injected, a gauze pad is applied with sufficient pressure to bring the varicosity to the level of the surrounding tissues. A flat pad is preferable to a cotton ball or gauze sponge, as it will insure smoother compression.

At times it may be advisable to use light pressure with the finger tips upon the varicosity during the injection to avoid the formation of a large protruding thrombus. A number 25 or 26 gauge needle about three-quarters of an inch long with short bevel is best suited for the average-sized varicosity. Longer needles may be necessary for the injection of the great saphenous vein. It will be found advantageous to use separate needles for the aspiration of the solution and for the injection itself. This will avoid possible contact dermatitis in individuals who may be sensitive to the solution employed, and at the same time the sharpness of the needle point is not impaired.

When there is no obstructing factor such as induration or eczema, I prefer to

make the puncture about one-third of an inch from the varicosity. The entry into the lumen of the vessel will be felt when the resistance of the vessel wall is overcome. This technical procedure minimizes the possibility of any extravasated sclerosing solution reaching the skin surface. I have employed this technic during the past four years, and I have encountered no case of slough at the site of injection, although others who inject directly over the varicosity have stated that slough formation is also a very rare occurrence. However, I consider the former technic invaluable when injecting extremely superficial, partially intracutaneous varicose veins. These are of a deep blue color, covered only by a thin layer of skin. It is advisable to introduce the needle parallel to the longer axis of the varicosity, as this makes transfixion of the vein less probable. Dislodging of the needle can be avoided by firm but gentle pressure of the fingers supporting the syringe on the extremity.

Extravasation, periphlebitis, and slough can be prevented by starting the injection in health tissue, avoiding puncture of a pigmented, indurated, or eczematous area. The injection of smaller isolated varices, loosely attached to the perivenous tissues, is facilitated by fixing the vessel with pressure or traction on the overlying tissues.

Retrograde flow of blood is to be considered when injecting varicose veins. At times, the reaction will occur at a lower level of the injection, and a protruding thrombus may result. It is therefore better to begin with the injection of the lower varicosities or the lower segment of a varicosity. After having established the tolerance of the patient to the sclerosing solution, I do not hesitate to make multiple injections at one sitting if the nervous temperament of the patient does not contraindicate it. A diagrammatical drawing of the injected veins with remarks as to the date of injection, dosage, reaction, discoloration, etc., will be of great help and will save considerable time (Fig. 2).

One should watch for skin sensitivity to adhesive tape. The patient should be in-

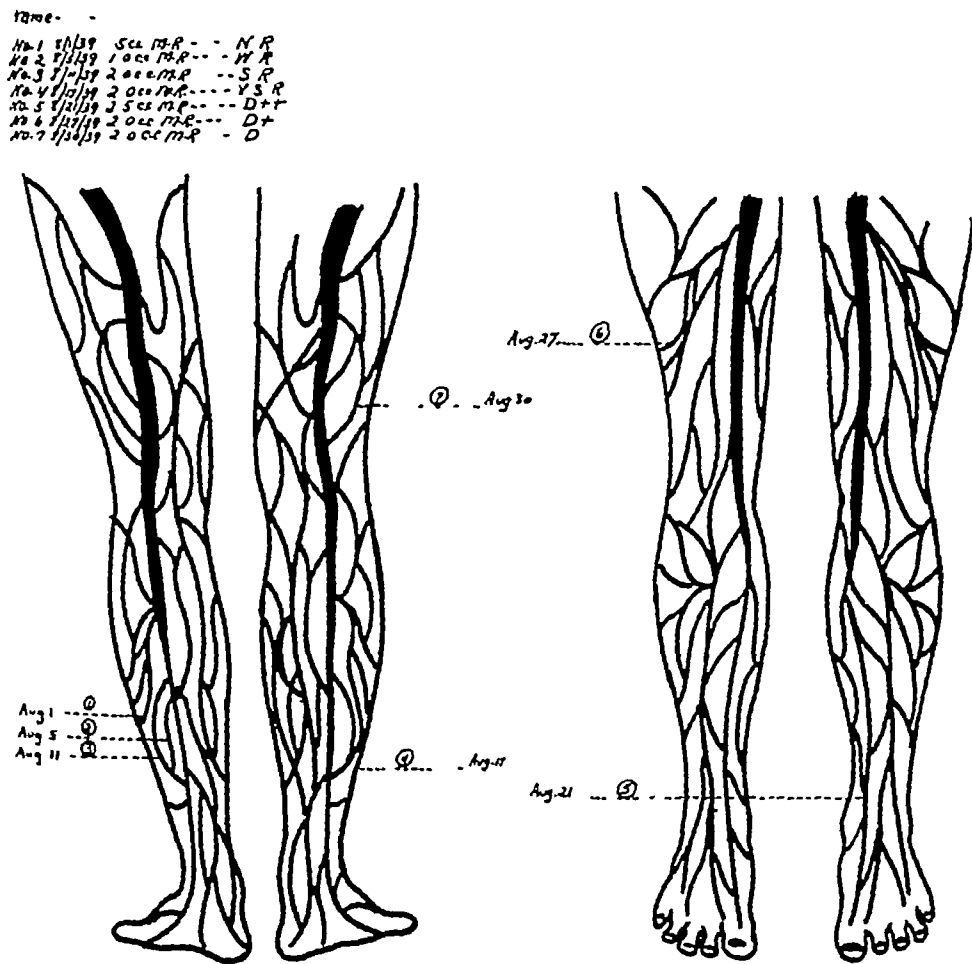


FIG 2 Diagrammatic chart for the purpose of record NR—no reaction WR—weak reaction, SR—strong reaction VSR—very strong reaction, D—discoloration

structed to remove the strapping as soon as he feels intense burning or if a skin eruption develops Should a mild sensitivity to adhesive plaster be present, I generally insert gauze strips between the adhesive and the skin, leaving only about one inch at both ends of the adhesive fastened to the skin In cases of absolute intolerance, one must resort to the use of bandages to secure the compressing pad Following the injection of larger varicosities, it is advisable to have the patient wear a supporting bandage during treatment.

Returning to the question of the choice of sclerosing agents, I have found that

sodium morrhuate 5 per cent is most widely used in the majority of the clinics Sodium chloride 20 per cent is used in one of the oldest clinics in the country, with quinine urethane as the second choice for smaller varicosities Where sodium morrhuate is used as the solution of choice, treatment is immediately stopped at the first sign of sensitization and another solution substituted Sodium morrhuate can be given in amounts of 5 cc or more when there is no sign of sensitivity on the part of the patient. In some cases this amount may fail to produce obliteration in a larger varicosity, while a second attempt with the same dosage or an additional 1 cc

may be successful, perhaps as a result of the previous irritant action upon the intima of the varicosity. Slow injection of the sclerosing solution is helpful in the obliteration of larger varicosities. Rest for 10 minutes in the office, following injection of a larger varicosity, may help to localize the sclerosing solution.

Quinine urethane, a stronger irritant, can also be used in larger amounts after one has carefully determined the tolerance of the patient to this drug. For smaller intracutaneous varicosities, it is best first to try 2 cc invertose 60 to 70 per cent. This is often the safest method for obliterating so-called "spiderweb" formations. The viscosity of the solution can be diminished by heating the ampule or vial before use. A characteristic blanching that spreads along a wide net of these veins can be observed when 1 or 2 cc of this solution is injected.

In their latest book, Mahorner and Ochsner<sup>5</sup> mention the use of sodium gyno-cardate 5 per cent as an efficient sclerosing agent, especially for the larger varicosities or large blood lakes. Sodium morrhuate is their second choice, with quinine urethane or quinine and urea hydrochloride occasionally used, especially when treating small intracutaneous or superficial veins.

Monoethanolamine oleate, which has a fairly wide safety margin, may also be used in larger quantities. Although other workers have reported allergic reactions, I have not as yet encountered any.

The quantity of sclerosing solution for each injection depends entirely upon the response of the patient to the same or to a different solution employed at the last injection. However, even a carefully measured dose may sometimes produce a severe reaction with extensive occlusion and pain. It may, therefore, prove to be of some value, in certain instances, to caution the patient about the possibility of such an occurrence. For intense pain, cold applications should be applied. The patient need not interrupt his work even if a marked reaction from the injection occurs. Adequate support will minimize swelling and pain.

## Discoloration Following Thrombosis

Discoloration often occurs after thrombosis of the varicosities. I have observed that this may be lessened in the same patient by changing the solution. Unavoidable discoloration frequently occurs after the injection of a varicosity and, for cosmetic reasons, is objectionable to most women. Having observed that discoloration is only slightly visible after treating patients with sun-tanned extremities, I have succeeded in eliminating this deterrent to treatment by exposing the extremities to artificial sun-ray irradiation.

## Technic of Ligation

Ligation of the saphenous vein is best done in a hospital because of the availability of the operating room facilities and the necessary assistance. The operation is painless and is done under local anesthesia. Administration of a sedative to patients of nervous temperament is advisable. Palpation of the femoral artery in determining the location of the fossa ovale is helpful. McPheeters' percussion test also is used for locating the femoral saphenous junction. The incision need not be longer than three inches. Most workers prefer an incision parallel to Poupart's ligament. Ochsner, however, thinks that the longitudinal incision gives a better exposition of the tributary veins at the upper end of the saphenous vein. The vein is doubly ligated, and about 2 cm of the intervening vein is resected. Transfixion of the vein stumps is done by many workers and omitted by others. Most workers consider ligation and transection of the tributaries of greatest importance to minimize the possibility of recurrences. The most constant tributaries are the external pudendal, the external superficial iliac, and the superficial inferior epigastric. From 3 to 5 cc of the sclerosing solution is injected into the distal segment of the transected vein. The patient is permitted to go home an hour after the operation and is advised to be ambulatory. An elastic bandage is applied to give support.



## Care of Varicose Ulcers

In the presence of varicose ulcers before the injection of veins is begun, any existing infection should be cleared up by rest in bed, elevation of the extremity, and the application of hot hypertonic solution packs. Mahorner and Ochsner advocate small doses of sulfanilamide to control infection in long standing ulcers. Krieg<sup>6</sup> uses vitamin B<sub>1</sub> for the control of pain. Ten mg doses are given three times daily to obtain early saturation, and thereafter half this amount is prescribed. As an efficacious dressing, Mahorner uses gauze that is impregnated in white vaseline containing iodoform 5 per cent. A rubber sponge or the Unna paste boote for compression will control stasis and pain. In office practice, medicopaste or crumcast bandages, an elastoplast, or numerous other similar products will answer the purpose of compression. Where there are ulcers of long standing with considerable scarring, Owens<sup>7</sup> excises the scar tissue and then applies skin grafts.

General ability to recognize dermatologic lesions will aid materially in treating varicose veins and their accompanying skin complications. Quite frequently it is the deficient circulation of the extremity that prolongs the duration of a co-existing skin lesion. Tar products will be found beneficial in the treatment of varicose eczemas. The use of x-ray therapy in small amounts (about 2 skin units total) will also help to obtain satisfactory results.

The frequent association of fallen

arches and neglected varicose vein conditions is not a mere coincidence. The care and correction of associated foot deformities is important in the treatment of varicose veins.

## Conclusion

Varicose veins are seen frequently, and the general practitioner should attempt to discover the early cases and treat them prophylactically long before they cause disability and complications. Authors vary as to the incidence of varicose veins, but a survey of crowded beaches will convince anyone of the prevalence of this condition.

In order to detect early varicosities, it is best to examine the patient while he stands on a chair or table, since in this elevated position the small varicosities are more easily visible.

Patients rarely request treatment of early varicosities, for many of them are unaware of having them, but they appreciate the suggested obliteration while under treatment for other conditions. Careful treatment will result in physiologic and cosmetic improvement, thereby gaining for the physician the patient's confidence.

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## INCREASE IN BIRTH CONTROL CENTERS

Medically directed birth control centers in New York State have increased from seventy to eighty-one in the past year, it was reported on May 8 at a meeting and reception for physicians from various parts of New York State, in the Hotel Barclay, New York City. The arrangements were made by the Medical Advisory Board of the New York State Birth Control Federation. Guest speakers were Richard N. Pierson, M.D., president of the Birth Control Federation of America, who discussed "The National Birth Control Program" and Harvey B. Matthews, M.D., clinical professor of Obstetrics and Gynecology, Long Island College of Medicine, Brooklyn, who spoke on "Birth Control—A Challenge

to the Doctor." James A. Corscaden, M.D., Chairman of the Medical Advisory Board, presided. A medical film, "The Biology of Conception" was shown.

There are now centers in twenty-six counties in the State of New York, where the underprivileged mother may seek medical advice on family planning" according to Thomas J. Parks, medical director of the Federation. "New centers were opened in Auburn, Batavia, Bangall, Jamestown, Ontario County, Red Hook, Staten Island, Troy, Watertown, and Yonkers in the past year. Over five hundred physicians are cooperating in the birth control program for our state."

# THE PRACTICAL VALUE OF ENDOMETRIAL BIOPSIES

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**D**URING the past decade rapid strides have been made in the field of endocrinology, especially in relation to gynecologic problems. Much interest has been directed to the endometrium, for it is believed that this tissue accurately reflects the hormonal activity of the ovary. Since the outstanding work of Hitschman and Adler,<sup>1</sup> who, in 1908, first described the cyclic changes of the endometrium, many other workers have correlated the histologic picture with hormonal function. Herrel and Broders,<sup>2</sup> Sturgis and Meigs,<sup>3</sup> Campbell, Lendrum, and Sevringhaus,<sup>4</sup> in recent publications, have emphasized the fact that the endometrium of the normal menstruating woman undergoes definite changes of proliferation and secretion. These changes operate in a regular balanced cycle and are under the direct influence of the two ovarian hormones, estrone and progesterone.

During the past three years we have had the opportunity to study about five hundred endometrial sections that were obtained by means of the suction curet. Various types of both punch and suction curets have been devised for biopsy purposes. We have used the Novak suction curet in most of our cases and found it to be satisfactory. The technic, a simple clinical procedure, is briefly described as follows:

With the patient in lithotomy position and the cervix well cleaned and painted with iodine, the anterior lip is grasped with a short tenaculum. A sound is now introduced to determine the depth and direction of the uterine cavity. Immediately following the withdrawal of the sound, the suction curet is introduced gently until the upper portion of the cavity has been reached. Then the

distal end of the cannula is connected to an ordinary 10-cc glass syringe by means of two small pieces of rubber tubing and a glass connecting rod. Several sweeping motions downward against the anterior, posterior, and lateral walls of the uterus are carried out, at the same time the barrel of the syringe is slowly withdrawn by an assistant. This provides a moderate degree of suction. The curet is now removed from the uterus and the contents forced by the syringe into a small bottle containing 70 per cent alcohol.

Contraindications to this procedure are the same as to any other intrauterine manipulation—namely, the presence of an acute infection or the possibility of intrauterine pregnancy. We have never seen any complications or severe reactions following the suction biopsy. Occasionally, a patient may complain of cramplike pain. This is promptly relieved by rest and mild sedation. We have never hospitalized a patient in order to take an endometrial biopsy and wish to emphasize that it is simply an office or outpatient department procedure.

The clinician and the pathologist should correlate their work to interpret properly the endometrial biopsy. A careful history, a thorough physical examination, and such laboratory tests as basal metabolic reading, complete blood count, glucose tolerance test, Wassermann, etc., should all be utilized in conjunction with the endometrial study. Any previous therapy received by the patient must be noted. It is quite important to record the exact time the biopsy has been taken in relation to the menstrual cycle. In cases of prolonged amenorrhea it is advisable to take repeated biopsies at



FIG 1 CASE 1 Glands in state of impending and beginning secretion. Nonfunctioning glands with evidence of hyperplasia on the right side of the photomicrograph (Before therapy)



FIG 2 CASE 1 Fully developed secretory phase mild edema of stroma (After therapy)

weekly intervals for a period of four weeks. In cases of sterility it is important to take the endometrial biopsy during the premenstrual period. A case studied in the above manner is now ready for a tentative diagnosis, and a plan of therapy is outlined after all observations have been considered. It has been our policy never to institute therapy of any kind before a complete study has been made.

From a histologic point of view we have been able to group our cases into three categories according to the degree of functional change. The first group was comprised of those cases that showed a slight degree of structural change. Included in this classification were cases that showed attempts at proliferation and secretion. In this group, we found that small amounts of thyroid extract were efficacious in bringing about both a clinical and histologic cure. The second group showed evidence of more profound structural changes. These may be cyst formation and fibrosis of the stroma. In this group there were many cases of genital hypoplasia that responded to substitution therapy in addition to the administration of thyroid extract. In these cases we made an effort to give any substitutive therapy not longer than six to eight weeks without checking our results with subsequent biopsies, for we feel that substitution therapy, continued over a long

period of time, may be harmful to the endocrine system. The third group included those cases showing complete lack of endometrial response to the ovarian hormones. Marked fibrosis and atrophy of the glandular elements were common observations in this group. Clinically, we have found that these cases do not respond to endocrine therapy with the preparations available at the present time. However, we have observed some striking results in this group following the application of x-ray stimulation to the pituitary and ovaries.

We have selected the following cases from our series in order to illustrate the value of the endometrial biopsy as a guide to both diagnosis and therapy. These cases are among the common type seen both in the clinic and in everyday practice.

### Case Report

*Case 1*—M. H., aged 26, had a chief complaint of secondary amenorrhea and obesity. This patient had amenorrhea for seven months prior to her first visit. Menses were previously regular, beginning at 10 and occurring every twenty-eight days with a duration of 7 days. Her weight at first examination 208 pounds, a gain of 60 pounds in the last two years. Upon physical examination the patient presented generalized obesity. The external genitalia were small, the cervix showed evidence of a superficial erosion, and the uterus was normal in size. No adnexal pathology was found. The basal metabolic rate was -9 per cent. First endometrial biopsy (Fig 1) showed evidence of



FIG 3 CASE 2 Atrophy of endometrium with cyst formation and scant proliferative activity as evidenced from the central group of glands (Before therapy)

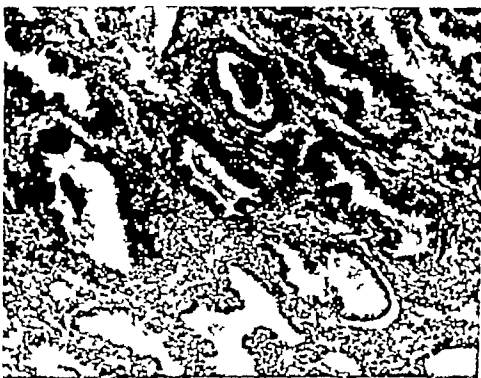


FIG 4 CASE 2 Secretory phase (with somewhat irregular arrangement of glands) (After therapy)

mild basal glandular hyperplasia with abortive attempts at secretion. This patient was given  $\frac{1}{2}$  grain thyroid extract three times a day and was put on a low caloric diet. Two months after therapy, her periods were resumed and became quite regular. A biopsy taken at this time (Fig 2) disclosed a fully developed secretory phase. She lost 24 pounds in two months. Her periods remained regular for one year, until she became pregnant, without any further therapy.

*Case 2*—A H., aged 18, had a chief complaint of secondary amenorrhea and obesity. Periods were irregular for the past two years, occurring every two to nine months with a duration of five days. The last menstrual period had been 6 months previously. Menarche began at the age of 11. Upon physical examination the patient weighed 161 pounds, revealing typical girdle obesity. The external genitalia were



FIG 5 CASE 3 Note the vacuolated basal portions of the cells (glycogen ring formation) indicating impending secretion. (Before therapy)



FIG 6 CASE 3 Glands in state of early (arrested?) proliferation (After prolonged endocrine therapy)

small and the cervix infantile and eroded. The uterus was small, 2 inches by sound. The basal metabolic rate was -11 per cent. Endometrial biopsy (Fig 3) revealed cyst formation and attempts at proliferation, with no evidence of secretion. Thyroid, low caloric diet, and substitution treatment were given (estrone and progesterone by injection). Three months later the patient had lost 26 pounds. Her periods became regular, and the uterus measured 3 inches by sound. Endometrial biopsy taken recently presented a well-developed secretory phase (Fig 4). Therapy was tapered off, and the patient was followed for a period of one year. She has been regular every month, and her weight has remained between 130 to 135 pounds. At the present time she comes in for observation. No therapy of any kind is being administered.

*Case 3*—M S., aged 25, married four years, had a chief complaint of primary sterility.

Menses began at 13 and occurred every five to six weeks with a duration of four to five days. For the past three years there were prolonged periods of amenorrhea—six to twelve weeks. Physical examination revealed no general endocrinopathy. Infantile uterus measured 2 inches by sound. No adnexal pathology was found. The sperm count of her husband was normal. Her tubes were patent by insufflation. The basal metabolic rate was  $-4$  per cent. Endo-

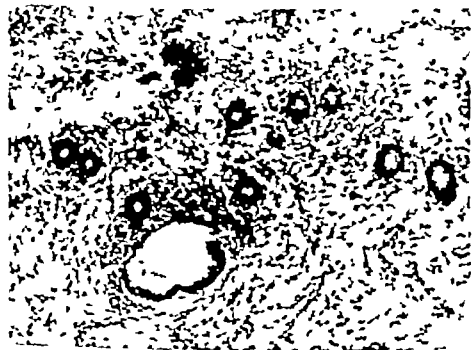


FIG 7 CASE 3 Glands in state of arrested early proliferation with tendency to atrophy (After prolonged endocrine therapy)

metrial biopsy (Fig 5) showed abortive attempts of proliferation and secretion—(Group 1, according to our histologic classification). This patient received extensive therapy by another physician for a period of one year, including large doses of estrone, wheat germ oil, and antuitrin S. Biopsies taken a year later (Figs. 6 and 7) showed evidence of a profound functional disturbance. These biopsies were taken two weeks apart in the premenstrual stage and showed considerable atrophy with slight proliferative effect. After studying these latter two biopsies, the patient was reclassified as Group 3. She received three stimulative doses of x-ray to the

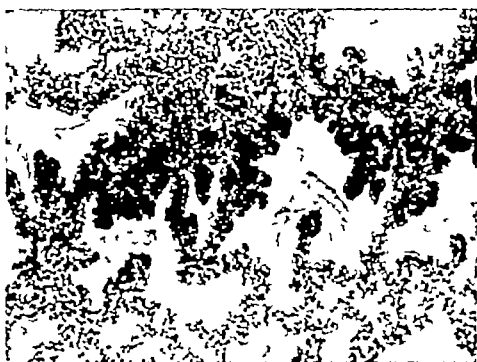


FIG 8 CASE 3 Endometrium in late secretory phase (After x-ray therapy)

pituitary and ovaries at weekly intervals. A biopsy taken following radiation therapy showed a well-developed secretory phase (Fig 9). Within two months conception took place and, at the time of this report, is progressing in a normal manner.

### Conclusions

1 The histologic character of the endometrium is an important guide to both normal and abnormal ovarian function.

2 The endometrial biopsy with the suction curet is a safe and simple office procedure.

3 The endometrial biopsy is of great practical value both in diagnosis and as a guide to therapy.

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### EXHIBIT AT THE ACADEMY OF MEDICINE LIBRARY

The exhibit cases in the Library of the New York Academy of Medicine, 2 East 103rd St., have been arranged to illustrate selected eponyms of pharmacy in dermatology and syphilology. Pictures of and books by men who have pharmaceutical preparations named after them are displayed. Some of the better known are Lassar, Fowler, Lister, Burrow, Vlemminkx, and Ehrlich. Metchnikoff, Baccelli, Althaus, Donovan, and Lang are less known for medicinals called after them. A few old-timers such as

Startin, von Swieten, and Zittmann have been included although few physicians recall their formulas.

The exhibit has been arranged by the staff of the Bureau of Social Hygiene of the Department of Health cooperating with the Library of the Academy of Medicine, under the direction of Dr. Herman Goodman and Dr. Archibald Mallach. The present exhibit will remain in the cases until July 1. It is open to the public on week days from 9 00 A.M. to 5 00 P.M.

# SECTIONAL RADIOGRAPHY IN THE DIAGNOSIS OF INTERESTING THORACIC PROBLEMS

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(From the Department of Roentgenology, City Hospital, Welfare Island)

**S**ECTIONAL radiography is another evidence of the close cooperation between two allied sciences—namely, engineering and medicine—whereby the result has produced an advance in diagnosis and has added another method to our medical armamentarium. This new method of radiography utilizes the principle whereby structures in a particular plane of the body are brought sharply into focus, while structures in other planes are blurred sufficiently to be reduced to a ground-glass background and obliterated.

Synonymous terms that have been applied to this x-ray technic are "stratigraphy," "tomography," "body section roentgenography," "planography," "x-ray focusing machine," and "laminography." At this hospital, we prefer to use the term sectional radiography.

It would not be amiss to review briefly the historical development of this technic in order to acquaint readers with the progress of this method. It has been developed comparatively recently but has by no means reached the height of its contributions to medical diagnosis. It was originally described by Bocage<sup>1</sup> in 1922. In the same year, Portes and Chausse<sup>2</sup> also described a similar type of examination. Ziedses des Plantes<sup>3</sup> claims he thought of this type of examination in 1921 but that he met with obstacles that prevented his developing it until 1928–1931. In 1931, he published a comprehensive description of his apparatus and work.

In addition to these pioneers, many other physicians and physicists have added from time to time to the improvement of the apparatus used.

Sectional radiography is of definite importance and of tremendous value in attaining a correct diagnosis in selected

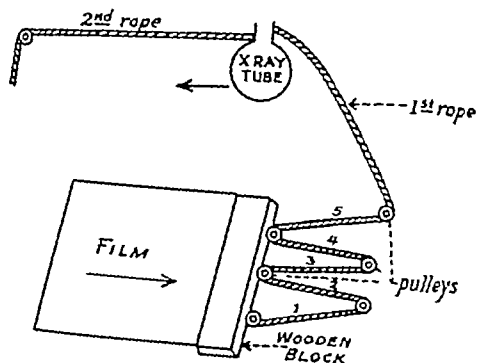
cases. It adds inestimable value not acquired by other methods.

The apparatus can be made simply. The costly finished products on the market, while of more importance and material, are not enhanced by the diagnostic standpoint in proportion to cost. A home-made apparatus built for less than \$10. In fact, at this hospital and also at other institutions, a very simple mechanism was constructed at a cost of less than \$5.00, with the pairing of the diagnostic value of the method, as we shall subsequently illustrate in cases.

It should be understood that this method is to be used only in cases where other methods prove unavailable. The number of films taken for a section depends entirely upon the thickness of the section in question and the pathologic process present that is to be examined. After a certain amount of practice, the absolute number of films necessary can be estimated, and by decreasing considerably the total number of films used. The cost of the films is negligible when considering the information obtained.

The ordinary roentgenograms impose all tissue and all structure on one plane. The detail of a given area, normal or pathologic, is necessarily obscured by shadows superimposed adjacent structures. A stereoscopic study does not solve the problem presented in many cases. The information concerning the interior of a structure or a large shadow is destroyed in a stereoscopic study. This is solved only by sectioning such a pathologic shadow that adequate information is obtained. Only by this method can the diagnosis be accomplished radiographically. Sectional radiographic plates can be obtained

any known depth and so depict more clearly the structures at that level. This means that obliterating shadows not in that section can be completely eliminated, and the area of pathology, which may be partly or completely obscured by such shadows of the surrounding structures, is sharply brought into focus and clearly visualized.



X ray tube and film move in opposite directions as indicated by arrows

FIG 1 Simplified diagram of sectional radiographic apparatus

The method is one wherein the x-ray tube and film are moved in opposite directions during any exposure. All shadows not in focus for a given distance will be blurred to such a degree that they become reduced to a ground-glass background. By modifying the ratio of the speed and the distance between the tube and the film, you may obtain sections through a given object from a fraction of an inch to an inch or more. The plane that will be in focus will present the shadows sharply. These shadows will be superimposed on the ground-glass background. The factors that control the depth of a section can be altered at will.

At our hospital, a simple home-made apparatus is used, the various depths being determined by mathematical calibration. The control of the depth sectioned was determined by means of a paraffin block with lead markers at half-inch spacing. Fig 1 illustrates the construction and operation of a very simple and inexpensive apparatus.



FIG 2 Shows thoracoplasty on the left side without any definite pathology being visible.



FIG 3 Sectional roentgenogram shows the large cavity in the collapsed portion of the left upper lobe

As the x-ray tube is pulled by the second rope (Fig 1), the film is pulled in the opposite direction. The distance of the x-ray tube from the film can, of course, be varied at will and is an important factor in regulating the depth of the section to be cut. The relative rates of speed of the tube and film are also easily

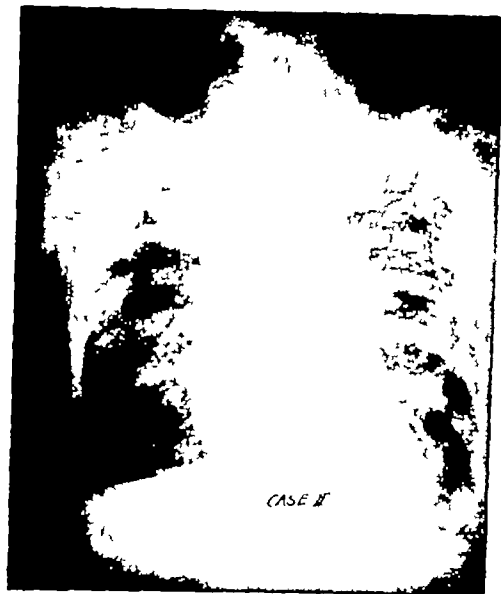


FIG 4 Shows proliferative productive changes at both apices. No cavitation is visible.

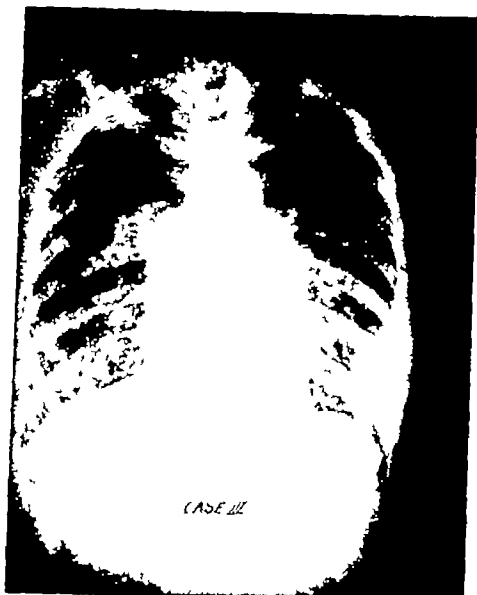


FIG 6 Shows numerous annular thin walled shadows radiating out from the hilar areas.



FIG 5 Sectional roentgenogram shows in the right apex a large cavity with many other smaller ones in the adjacent tissue.

changed. In the diagram, attached to the film through a wooden block there are five "folds" of first rope which divide the force of the pulling activity of the second rope on the x-ray tube. By varying the number of "folds" of first rope but keep-

ing the pull of the second rope on the x-ray tube constant, the relative rate of speed between the x-ray tube and film can be varied.

It has been our experience that the number of films necessary usually number seven or eight for satisfactory sectioning of the part in question. Thinner sections can be obtained whenever it is necessary to cut through a shadow in order to study more clearly its composition. Where very thin sections of an area are desired for study, some investigators have made as many as seven sections to the inch at a given level.<sup>4</sup> To minimize error, the paraffin block with the lead numerical markers are included in every picture so that there will be no doubt as to what depth or level the sectional x-ray was made.

The practical values of these x-ray studies are numerous. They can be used in visualizing lesions, anywhere in the body, that, because of size or location, are not clearly detected on routine study.

This method (1) aids in localizing pathologic lesions and foreign bodies, (2) gives a detailed structural study of pathologic shadows, (3) visualizes struc-





FIG 7 Sectional roentgenogram reveals numerous cavities

tures, such as bronchi, at particular levels for pathology or obstruction, (4) aids in identifying mediastinal structures, and (5) helps visualize bones and joint structures that are difficult to see in ordinary roentgenograms, such as the temporomandibular joint, sternoclavicular joint, and seventh cervical and first thoracic vertebrae, etc.

It is with the hope of stimulating more interest in the use of sectional radiography by others that we report the following cases. These illustrate problems not solved by the usual roentgenographic methods

### Case Reports

*Case 1*—K. S., white male, aged 51, complained of cough, fever, and loss of weight on admission. He was a known case of tuberculosis who had a left thoracoplasty with partial collapse of the left upper lobe. He also had a history of carcinoma of the tongue treated by x-ray during the past year. The sputum was negative for tubercle bacilli. A routine x-ray of the chest failed to reveal any reason for the patient's symptoms (Fig 2)

Problem—what was the cause of this man's symptoms?

Sectional roentgenogram, at four inches from the posterior chest wall, revealed a large cavity



FIG 8 Reveals a shadow radiating out from the left hilar region.



FIG 9 Sectional roentgenogram shows a shadow occluding the left main bronchus. Notice how the bronchus can be traced along its course except where it is occluded.

with several smaller ones in the adjacent tissue in the collapsed portion of the left upper lobe just above the left main bronchus (Fig 3)

Diagnosis—tuberculosis with multiple cavitation.

*Case 2*—T. L., white male, aged 70, was admitted in an extremely emaciated condition.



FIG 10 Shows how the pathology is obscured by thickened pleura and contraction of the right upper lobe.

There were no symptoms that referred to any organic disease except the debilitation and rales in both lungs. A clinical diagnosis of malnutrition and bronchopneumonia was made. Sedimentation time was fifty-five minutes for 18 mm. The ordinary x-ray revealed proliferative productive changes at both apices. No cavitation was noted (Fig 4).

Problem—did this man have an active tuberculosis?

Sectional radiography, at three inches from the posterior chest wall, revealed multiple cavitation (Fig 5).

*Case 3*—B. H., negro female, aged 21, entered the hospital with symptoms of cough, frequent colds, expectoration, and dyspnea—all of many months' duration. The ordinary chest x-ray showed areas of infiltration at the right apex. Extending from the hilar region radially into the lung parenchyma are numerous, annular, thin walled shadows (Fig 6). The search for acid-fast bacilli was negative.

Problem—was this old acid-fast process associated with cystic lung disease or were these shadows also tubercular cavities?

Sectional radiography, at three inches from the posterior chest wall revealed numerous cavities with thick walls communicating with the bronchi (Fig 7).

Diagnosis—tuberculosis with multiple cavitation. It is interesting to note that subsequently acid-fast bacilli were found.

*Case 4*—W. A., white male, aged 55, had a chief complaint of chronic cough with yellow-

white expectoration. He also had pain in the left chest and a weight loss of 30 pounds in four months. Examination revealed a diminution of the percussion note with diminished breath sounds. A routine x-ray showed a shadow extending out from the left hilar region (Fig 8).

Problem—was this a mediastinal neoplasm or hilar tuberculosis?



FIG 11 Sectional roentgenogram shows the bronchi of the right upper lobe dividing and one of the bronchioles entering a large cavity.

At three inches from the posterior chest wall, sectional radiography revealed a shadow occluding and surrounding the left main stem bronchus (Fig 9). It was diagnosed as a bronchogenic neoplasm and proved to be so at autopsy.

*Case 5*—C. C., negro female, aged 30, who entered the hospital with tubo-ovarian disease but with an ordinary roentgenogram, was found to have contraction of the right upper lobe. The parenchymal pathology was obscured by lung contraction and pleural thickening (Fig 10).

Problem—was this shadow tumor, tuberculosis, or chronic suppurative lung disease?

Sectional roentgenogram, at three inches from the posterior chest wall, revealed the bronchi of the right upper lobe being cut and entering areas of multiple cavitation. There was contraction of the right upper lobe with bronchiectasis, multiple cavitation, fibrosis and pleural thickening secondary to a chronic suppurative process (Fig 11).

Diagnosis—chronic suppurative disease of the lung.

*Case 6*—H. D., white male, aged 35, a known case of tuberculosis, had had previous pneumoly-

sis, empyema, thoracotomy, and phrenic crush on the right. A routine x-ray revealed a mass, about the size of a robin's egg, seen in the left chest (Fig 12).

Problem—what was the structural composition of this mass? In view of the localized lesion on the left side, does cavitation exist there?

Sectional roentgenogram revealed a localized



FIG 12 Shows a shadow in the middle of the lung field about the size of a robin's egg

encapsulated area of tuberculosis in the midst of which there was definite cavitation (Fig 13)

Diagnosis—tuberculous granuloma.

The above cases are illustrations of but a few of the many problems presented that were unanswered by other available diagnostic methods but solved by this procedure. The apparatus, because of its importance in solving just such problems as presented above and many others too numerous to present at this



FIG 13 Sectional roentgenogram shows the localized area of tuberculosis in the midst of which there is definite cavitation

time, should be part of the routine equipment of any general x-ray department. Certainly the cost is not prohibitive. We are offering the above cases in the hopes that many more roentgenologists will avail themselves of this method so that its utilization may advance from this initial stage. We feel that, up to the present time, the surface has been barely scratched with regard to the many uses to which this method may be applied.

### References

1. Bocage French patent No 536 464 (1922)
2. Portes and Chausse French patent No 541 941 (1922)
3. Ziedses des Plantes Nederl tijdschr v geneesk. 75 5218-5223 (1931)
4. Taylor Henry K. Quart. Bull. Sea View Hosp 3 No 4 357-374 (July) 1938

### VACANT INTERNSHIP

The Department of Hospitals announces several vacant internships at Welfare Hospital, which is devoted primarily to the treatment of chronic diseases and which is affiliated for research and teaching purposes with both the College of Physicians and Surgeons of Columbia University and with New York University College of Medicine. Welfare Hospital with a capacity of 1,500 beds,

is the latest and best-equipped institution in the Department of Hospitals.

Recent graduates seeking experience in chronic disease, which in the opinion of authorities is of steadily growing importance in medical practice, are requested to apply to Dr C G Scherf, medical superintendent, Welfare Hospital, Welfare Island, New York City.

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# HOUSE OF DELEGATES

## MINUTES OF THE ANNUAL MEETING

May 6 and 7, 1940

THE 134th Annual Meeting of the House of Delegates of the Medical Society of the State of New York was held at the Waldorf-Astoria, New York, on Monday, May 6, 1940, at 10 15 A.M.

Dr James M Flynn, Speaker, Dr Louis H Bauer, Vice-Speaker, Dr Peter Irving, Secretary, Dr Edward C Podvin, Assistant Secretary

SPEAKER FLYNN The House will be in order

### 1 Report of the Reference Committee on Credentials

SPEAKER FLYNN The Chair recognizes Dr Peter Irving, Chairman of the Reference Committee on Credentials

SECRETARY IRVING Mr Speaker, there are no disputed delegations, and all who have been seated are entitled to vote

SPEAKER FLYNN The Chair now declares the 134th Session of the House of Delegates open for the transaction of business

Mr Secretary we will now have the roll call by counties

### 2 Roll Call

Secretary Irving called the roll by counties, and stated "There is a quorum present"

### 3 In Memoriam of Five Departed Members

#### SECTIONS 9 35

SPEAKER FLYNN Will the members of the House kindly rise in memory of five of our members who have passed on since the last session Dr James H Borrell, President-elect, Dr James E Sadlier, a member of the Board of Trustees and a Past-President, Dr Charles Stover, a Past-President, Dr Thomas P Farmer, Chairman of the Council Committee on Public Health and Education, and Dr George M Fisher, a Past-President

The members rose and stood for a moment in memory of these departed members

### 4 Approval of the Minutes of the 1939 Session

SPEAKER FLYNN The first order of business is the approval of the minutes of the 1939 Session of the House

SECRETARY IRVING Mr Speaker, I move that the reading of the minutes of the 1939 Session of the House be dispensed with and that they be approved as published in the June 1 and June 15 issues of the *New York State Journal of Medicine*

DR ARTHUR J BEDELL, Albany I second that motion.

There being no discussion, the motion was put to a vote and was unanimously carried

### 5 Address by Dr Nathan B Van Etten, President of the American Medical Association

SPEAKER FLYNN I would like to have Dr

Madill and Dr Ross escort Dr Van Etten to the platform

(The delegates arose and applauded as Drs. Madill and Ross escorted Dr Van Etten to the platform)

SPEAKER FLYNN Dr Van Etten, as you know, is President of the American Medical Association and Past-President of our Society

DR NATHAN B VAN ETEN Mr Speaker and Members of the House of Delegates, it is indeed a privilege to be permitted to be here today, after having served for so very many years as an active member of this House of Delegates

New York has always been depended upon for intelligent conservatism as well as for all progressive legislation.

Last year at St Louis the National House adopted basic resolutions upon which were constructed the new national program of the American Medical Association Every word of that program is objective The false accusations that the American Medical Association is static and reactionary and antisocial are sharply denied in the letter and spirit of that forward-looking declaration.

Two thoughts are expressed in the platform which may seem sharply contradictory One is centralization of all governmental health activities in one new *National Health Department* and the other decentralization of all other health activities into local units of administration

Coordination of governmental health activities is simply a practical move to do away with much overlapping expense and reduction of duplicating machinery

Developing local health units may be a device to find sickness where it is and treat it on the spot, shorten governmental procedures, and keep the government out of medical practices

Wherever local problems can be solved, they lessen the mass of national responsibility If we settle minor problems we shall have few major problems

The platform deals in generalities Specific provisions for detailed development will have to be studied with care by all who are interested, such as the professions of medicine, public health nursing, and welfare organizations A great deal of laboratory work is needed Suggestions might well be made by legislative bodies such as yours Although the program evolved from the action of the National House of Delegates, perhaps it might be well to have it referred to one of your reference committees on Public Relations for study at this session or an expression of opinion by your delegates

Although the Wagner Health Bill is still resting in the Committee on Education in the Senate, where it is supposed to be undergoing revision, it is not likely to appear at this session of Congress In fact, Senator Wagner stated publicly at a meeting in New York on March

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Samuel B. Burk, Chairman New York

Arthur Woodson  
Thurber Jewett  
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SECRETARY, CESSORS AND DISTRICT  
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Clarence V. Costello Monroe  
Leon M. Kysor Steuben

REFERENCE COMMITTEE ON NEW  
BUSINESS C  
John J. Macdonald, Chairman Kings  
Lester A. Broun  
G. Scott Towne Saratoga  
Stanley P. Alderson Albany

I move that the reports of the officers and committees which have been published and distributed to the members of the House be referred to the respective reference committees without reading

Dr. CLARENCE G. BANDLER, New York I second that motion

There being no discussion, the motion was put to a vote, and was unanimously carried

SPEAKER FLYNN The Chair wishes to announce that there are tables on the first balcony for each reference committee, and each table is plainly marked

There will be a stenographer in attendance to type the four copies of the reports that are essential

If there are—and there must be—members here who are interested in particular reports and specific resolutions, I want them to feel free to go to the appropriate reference committees and have their say on them

We are going to try to do things a little bit different at this session

We will take a long recess this afternoon to enable the reference committees to carry on their work in a better way by giving them a longer time to study the reports and resolutions that have been referred to them

These reference committees can assemble at any time they want to at their respective tables

Mr. Secretary, are there any supplementary reports?

Secretary IRVING There is one to come from the Treasurer, which I believe he would prefer to read personally

7 Supplementary Report of the Treasurer  
SECTION 53 54

DR. GEORGE W. KOSAR As on previous occasions, I consider it desirable to present to this House an interpretation and elucidation of the *Auditors' Report* of your Society's financial affairs for the year 1938

My supplementary report is therefore more or less of a confidential report to the membership, which need not be circulated beyond these confines

I do not believe it would be desirable to have some of the things I want to present to you broadcast outside of our own circle, but they are matters about which you as delegates of the constituent county societies should be fully informed, for the county society members are essentially the taxpayers of the organization

The financial philosophy underlying an organized medical group such as ours is that each of us shall be assessed an amount of dues which will meet the necessary administrative and other expenses provided for in a prepared budget

As I insisted in previous reports, the latter must be kept within the income derived from dues. It does not mean, however, that the total appropriations must necessarily be spent—a saving policy is always desirable

There should always be a margin between budgetary appropriations and total income for possible additions to an investment account

I admit that the existence of the latter is often an incentive to further spending, nevertheless this is a temptation which must be checked when it does arise, unless extraordinary reasons demand a change of policy

We have been fortunate in the past to accumulate a modest reserve, but no satisfactory additions can be recorded in recent years. In view of future unsettled conditions, as well as upon other reasons, we may be compelled to draw upon these savings to an extent which now we have no means of estimating

Yet, while we can save it would be desirable to save within reason

The formal report on the Society's financial status made by our auditors, including the audited form printed in the JOURNAL, may be regarded as understandable by the average reader

My endeavor will be to explain it, whether I succeed will be left to your decision

The specific items in the Society's financial affairs to which I would call attention are as follows: (1) assets and income, (2) administrative costs, (3) scientific activities, (4) publicity and publications, (5) change in dues years and readjustment of calendar year and fiscal years Preliminary to any further remarks it is to be noted that my statements necessarily are based on the calendar year ending December

31, 1939, which is that covered by the auditors' report but does not correspond with the budgetary allotments for the administrative year ending June 30, 1940

1 Assets and Income.—In reviewing the assets of the Society, reference may be made to a later statement, dated April 6, 1940, and transmitted as one of its regular functions by the financial advisory service of the Chase National Bank. This shows an approximate market value of our securities as of that date of \$229,971, somewhat less than on the date of the auditors' report for 1939, owing to depreciations which may or may not be recovered. The approximate annual income from investments is slightly over \$9,000, which includes that from various special trust funds. Since the decision made by the House of Delegates to purchase equities in about equal proportion to mortgage bond holdings, we held on April 6, about 42 per cent of government and other bonds, 22 per cent of preferred, and 35 per cent of common stocks. Since this last report, funds obtained from "called" bonds and from accumulations of interest in the investment account were used to purchase an additional \$15,000 of United States Treasury and municipal bonds. The group of defaulted bonds which we possess are still being held for possible advancement, and, as a matter of fact, their situation has improved since last year. The losses incident to the depressed market prices during previous years, which the former House of Delegates directed to be made up by a "recouping fund" of approximately \$15,000, have been fully met by purchases of additional securities out of current funds.

The depressed character and uncertainty of the stock market demands close watch and proper distribution of our security holdings. Such advice has been ably extended by the financial service contracted for and supplied by the Investment Department of the Chase National Bank. It is given without prejudice along safe and sound lines and your Treasurer can see no reason for changing our present arrangements.

Your attention is drawn to the very important fact that the funds of the Society must be conserved from the standpoint of safety of principal rather than of interest returns. Therefore, we have disposed of all speculative issues and have retained a certain amount of cash in savings banks, amounting on April 11 approximately to \$25,000.

The Society's income from dues during the year 1939 amounted to \$162,006, which, according to resolution, must serve as a basis for the budget. The activities of your Society entailed an expenditure of \$138,465 03 during 1939, leaving a balance over income of \$23,540 97. However, note must be taken of the fact that the *Directory* expenses for printing and distribution have not been charged, as this account was not yet adjusted at the date of the auditors' report and must be entered in the statement for 1940, but the cost to the Society will be about \$23,000 as calculated to the time of writing this report. And there are other expenditures to be met, including the charges for moving into our new quarters and the necessary furniture and equipment. I will reserve further comment except to say that the additional outlays probably will wipe out practically all the hoped for surplus.

2 Administrative Costs.—Here must be included salaries of officers and clerical staff, rent, expenditures for travel, council committees, counsel, bureaus, and district branch meetings. Grossly itemized these are as follows for 1939: salaries, \$57,929 95, rent and office expenses, taxes, etc., \$9,846 59, travel for delegates, officers, council, etc., \$8,245 34, expense of council committees, \$6,726 90, Workmen's Compensation and legislative bureaus, \$11,890 86 (excluding salaries), district branches, \$1,507 32. The administrative costs, omitting certain minor items, thus amount to \$96,146 96—well over one-half of our income from dues.

3 Scientific Activities.—The cost of these items appear minor unless we designate the *JOURNAL* as one of them. The annual meeting is properly scientific but pays its expenses. The Committee on Public Health and Education spent \$3,411 04 last year. This total is not an impressive figure as such.

4 Publicity and Publications.—The general outlays for these activities have already been noted. Specifically, the net cost of the Public Relations Bureau was \$3,214 42 excluding salaries, which are combined with those of the *JOURNAL*. The income from the latter from advertising and other sources was \$55,824 40, the costs of publication, including salaries, amounted to \$87,971 37. In other words, the deficit in this activity was \$32,146 97. The publications account required an outlay of \$40,361 39 or about one-quarter of the Society's income from dues, although it must be recorded that certain definite economies have been achieved in recent months.

5 Readjustment of Dues and Fiscal Years, with Change in Date of State Society Assessment.—This question will be fully discussed in connection with a proposed amendment to Bylaws. The contemplated change, if agreed to, will simplify greatly the conduct of your Society's financial affairs.

The foregoing attempted elucidation of the formal and complicated auditors' statement should impress the House of Delegates with the extent of the Society's financial business, involving the expenditure during 1939 of about \$140,000. In taking over the publication of the *JOURNAL* as well as the *Directory*, the work of the New York office and its force has been largely expanded. However it appears to your Treasurer that the financial handling of the Society's business is much confused and that more and competent oversight and direction is essential. The entire system of accounting, as practiced in recent years, is complicated and involved, as must be evident from the present auditors' statement, only an abstract of which appears in the *JOURNAL*. Efforts by your Treasurer to simplify the bookkeeping and to develop a more satisfactory posting and cost system have been delayed by the moving to our new quarters. We do not have the ready knowledge at hand to know day by day where we stand financially. Your Treasurer also feels that a more business-like and effectual conduct of the Society's publication and publicity activities is necessary. This would demand a complete change in the organization of the Publication Committee. The latter, in my belief, is unwieldy. It should be made up of fewer men, resident in this city,

so as to permit of regular and frequent conferences for the discussion and handling of publication matters. Aside from a more satisfactory editorial conduct of the *JOURNAL* and *Directory*, this arrangement would ensure greater economy and efficiency. Any further discussion naturally is not appropriate in this report and must be taken up elsewhere.

As my report to you may appear rather critical, you will ask, quite naturally, what constructive suggestions have I to offer. I will venture several recommendations for your consideration, but before doing so I want to give you a few words of explanation of the present status of the Society's business affairs. We have grown in numbers and the costs of administration have risen correspondingly. We must pay social security and unemployment taxes today, which were unknown a few years ago. The publicity bureau is a recent and I might add, it was at first an expensive venture. The publication by the Society of the *JOURNAL* and *Directory*, both on a new basis, have required a great deal of money to launch them properly. The Workmen's Compensation Bureau is another recent addition to our activities. We have added a general manager and a director of publicity to our official family. This growth in our activities has been sudden, it was not well coordinated and integration between the various units, in my opinion and, speaking again very bluntly, is largely lacking and must be more adequately developed. We are in reality a big business organization, we have an elaborate machine which, in my estimation, does not function as smoothly as it could and should, nor as economically. No one thing is going to clear the situation, we must have a thorough reorganization in order to secure an adequate return for our investment. I am not finding fault with those appointed, elected, or designated to fill their respective offices—invariably they have worked hard and faithfully—but a mechanism must be developed to make their efforts more effective.

Therefore, in conclusion, I would submit for your attention the following recommendations:

1 *Approval of the proposed amendment to readjust the Society's fiscal year.* However, in view of the immediate necessity of bringing some order out of the present chaos of the Society's financial affairs, your Treasurer further recommends that pending the adoption of this amendment, the House of Delegates by formal decree, order the new dues year to begin January 1, 1941, that the new fiscal year begin January 1, 1941, and the present budget as adopted for the period from July 1, 1940, to June 30, 1941, be changed so as to cover the period from July 1, 1940 to and including December 31, 1940.

2 *A careful study of the business setup of the New York office,* in order to develop a more adequate system of accounting and bookkeeping, as well as efficient office routine, both in the general and the publication offices, by a special committee of five, including the General Manager, the Director of Public Relations, the Treasurer, the Literary Editor and a member of the Board of Trustees—this committee to report to the Council at the October meeting.

3 *Vesting the responsibility for the conduct of the JOURNAL and Directory production in a local committee of five to consist of the General*

Manager, Director of Bureau of Public Relations, Literary Editor, Treasurer and a member of the Board of Trustees. This *publication committee* to make an early study of the present publication features with the especial purpose of effecting a more economical and efficient conduct of these activities and report to the Council as soon as possible.

4 *Considering the appointment of a second assistant treasurer,* who shall be principal bookkeeper, adequately bonded and duly remunerated who shall have no voice in the Council and be under direct supervision and orders of the Treasurer or Assistant Treasurer and, surrounded with proper precautions, shall act as disbursing officer of all rotating funds as may be necessary for the conduct of the Society's affairs to be set up by the Board of Trustees and the Treasurer.

In presenting the foregoing recommendations for your consideration, I do so in the belief that certain changes are essential in the administration of the Society's functions. My suggestions, it must be understood, are entirely without prejudice to the very sincere efforts of those entrusted with the conduct of your affairs. As I have already shown, we have grown much in recent years, but I feel that some of our ventures have not developed entirely beyond the stage of trial and experiment. The time has come, however, for a thorough check-up and diagnostic study. If there are defects and shortcomings in the present way of doing things, and I believe there are, then the proper remedies must be found and applied in order that a more effective coordination in the conduct of our affairs can be developed. Whether my recommendations will secure the desired ends I do not know, but I feel that they should be given some consideration.

**SPEAKER FLYNN** This supplementary report of the Treasurer will be referred jointly to the Reference Committees on the Reports of the Treasurer and Board of Trustees and on Report of the Council—Part IV, which has to do with medical publicity and publications, Dr DiNatale being the Chairman of the Reference Committee on the Reports of the Treasurer and Board of Trustees, and Dr Winslow being the Chairman of the Reference Committee on Report of the Council—Part IV.

The Chair recognizes Dr Trick, Chairman of the Board of Trustees, who has a supplementary report.

## 8 Supplementary Report of Board of Trustees

### SECTION 5A

Your Board is gratified to be able to report, after scrutiny of the expenditures of the first nine months of the fiscal year 1939-1940, together with an estimate for the remaining three months that the total outgo will be well within the total appropriation of \$158,935 03. Even after counting in the cost of expenses of moving (about \$3 500) it looks as if there would be a saving of at least ten thousand (\$10,000) dollars. This is approximately 7 per cent of the total budgeted figure.

**HARRY R. TRICK, M.D. Chairman** **JAMES F. ROONEY, M.D.** **GEORGE W. COTTIS, M.D.** **WILLIAM H. ROSS, M.D.** **THOMAS M. BRENNAN, M.D.**

**SPEAKER FLYNN** The supplementary report from the Board of Trustees will be referred to



the Reference Committee on Reports of the Treasurer and Board of Trustees, of which Dr DiNatale is Chairman

Dr Irving, have you a supplementary report of the Council?

SECRETARY IRVING Yes, there is a supplementary report, which has been mimeographed and distributed to the members of the House here We could not send it out in advance, but everybody has it, and I think it could well go straight to the Reference Committee, sir

SEVERAL VOICES We have not a copy of that supplementary report

SECRETARY IRVING There are extra copies here, which you may have if you will come up and get them

(Those who had not previously received a copy came up to the platform and got a copy)

### 9 Supplementary Report of Council

The Council has the honor to submit a Supplementary Report on certain matters that have come under consideration or been brought to conclusion since the regular Annual Report was prepared for the April 1, 1940, issue of the *New York State Journal of Medicine* The following subjects are covered

Part I	Maternal Welfare
	Deaf and Hard of Hearing
Part IV	Legislation
Part V	Finance Committee
	Dues Year and Fiscal Year
	Delegates
	Memorials

#### Part I

#### MATERNAL WELFARE SECTION 55

Following the publication of that portion of its report, the Council on April 11 received a further report from the Subcommittee on Maternal Welfare and took action thereon

In accord with the findings of the committee, the Council directed that, for the purpose of setting up advisory committees—obstetrics and pediatrics—the counties of the State of New York be grouped in twelve (12) different regions as follows

Region 1	New York, Richmond, Bronx
Region 2	Kings, Queens, Nassau, Suffolk
Region 3	Westchester, Rockland, Dutchess, Putnam, Orange
Region 4	Schenectady, Fulton, Montgomery, Schoharie, Green, Ulster
Region 5	Albany, Washington, Saratoga, Columbia, Warren, Rensselaer
Region 6	Clinton, Essex, Franklin, St Lawrence
Region 7	Jefferson, Lewis, Herkimer, Hamilton
Region 8	Onondaga, Oswego, Oneida, Madison, Cortland, Cayuga
Region 9	Broome, Tioga, Chenango, Otsego, Delaware, Sullivan
Region 10	Monroe, Orleans, Wayne, Livingston, Ontario, Yates, Seneca
Region 11	Chemung, Schuyler, Steuben, Tompkins, Allegany
Region 12	Erie, Niagara, Chautauqua, Cattaraugus, Genesee, Wyoming

The Council decided that there be appointed two regional consultants in each of these areas,

the one consultant to be in obstetrics and the other in pediatrics It approved the committee's outlining of the duties of these regional consultants as follows

- 1 Survey of maternity facilities—
- 2 Stimulate and provide county societies with maternal and child health program—
- 3 Provide postgraduate refresher courses so far as possible—
- 4 Distribution of literature and standards—
- 5 Accumulate all state and county statistics applicable to the problem of maternal and child welfare—
- 6 Plan for obstetric conferences in each county or in each region—time, place and frequency to depend upon the amount and character of the material Preventability, not responsibility, is to be discussed, and controllable factors discovered—
- 7 Study neonatal deaths, stillbirths, and particularly the problems of the premature infant

On nomination by the President, there were appointed the following regional consultants in obstetrics

Region 1	George W Kosmak	New York
Region 2	Harvey B Matthews	Brooklyn
Region 3	Julian Hawthorne	Rye
Region 4	William M Mallia	Schenectady
Region 5	Joseph O'C Kiernan	Albany
Region 6	Elmer Wessel	Plattsburg
Region 7	James L Crossley	Watertown
Region 8	Edward C Hughes	Syracuse
Region 9	Stuart B Blakely	Binghamton
Region 10	Ward L Ekas	Rochester
Region 11	Reeve B Howland	Elmira
Region 12	Louis A Siegel	Buffalo

The committee advised, and the Council agreed, that it would be well to await the more perfect organization of the obstetrics side of the picture before the regional consultants in pediatrics should be added

Space has been set aside for a meeting of these consultants with the Maternal Welfare Committee at The Waldorf-Astoria on Monday, May 6, 1940, at 2 00 P M The Council also authorized an exhibit on maternal welfare to be set up at the Annual Meeting

#### DEAF AND HARD OF HEARING SECTION 55

Dr Hambrook, Chairman of the Deaf and Hard of Hearing Committee, who is also a member of the Advisory Legislative Commission considering this subject, recorded disappointment, which was shared by the Council, over the failure of the 1940 Legislature to pass a bill drafted to take care of the hard of hearing children This bill was devised to provide lip-reading instruction for about 65,000 children in the State The earlier thought that a very large budgetary figure was needed to finance this was definitely shown to be incorrect The Commission had worked the matter out to the final point where it was clear that not over \$80,000 would be required

Dr Hambrook had been unable to discover why the legislators let this matter drop It is the belief of the Council that effort should be made next year to persuade them to take this forward step in public health

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parable to the one required in New York State at that time with a *rating* equivalent to that required for passing the New York State examination. It was found that in some instances the contracts for reciprocity were held with states whose requirements were no longer the equivalent of those of New York State.

Senate Int 1400—Condon, Assembly Int 1661—Armstrong, amends the *Workmen's Compensation Law* by shortening from twenty to fifteen days the period in which the physician is required to make the first C4 report of a patient under treatment, and, requiring that he submit progress reports, if requested in writing by the industrial commissioner, industrial board employer or insurance carrier, at intervals of not less than three weeks or at less frequent intervals if requested. It further provides that where an employer has failed to secure compensation for his employees, the board may make an award to the physicians or hospitals for the services rendered, in accordance with the compensation schedule of fees.

Senate Int 1451—Mahoney, Assembly Int 1806—Wagner amends that portion of the *Welfare Law* which requires that the public welfare district shall be responsible for providing necessary medical care for all persons under its care and for such persons otherwise able to maintain themselves who are unable to secure necessary medical care, by adding that the determination as to the medical care necessary for any person shall be made with the advice of a physician. The law is further amended by deleting the following sentence, "Acceptance of any patient as a public charge shall be in the discretion of the public welfare officer," and also by requiring that before the welfare officer transfers a patient from one hospital to another he shall only do so when, in the opinion of a physician, the condition of the patient permits.

Senate Int 1697—Desmond. This amendment to the Public Health Law prohibits drug stores from selling *drugs* or refilling prescriptions for the treatment of *venereal diseases*, and further clarifies prohibition of *advertisements* "relating to certain diseases."

Senate Int 1702—Schwartzwald, Assembly Int. 2171—Wagner, Assembly Int. 2881—Wilson provides that exposure to hazards of harmful dust for a sixty-day period after September 1, 1935, shall be presumed to be an injurious exposure for purposes of *workmen's compensation*, sets up a committee of expert consultants for all claims on account of silicosis or other dust diseases, findings of the committee to be prima facie evidence of fact, increases from \$3,000 to \$5,000 aggregate compensation which may be paid, increases to 360 days additional period of medical treatment or hospitalization, and appropriates \$25,000.

Senate Int 1799—Hampton, Assembly Int 2175—Piper, authorizes organization of medical indemnity corporations for furnishing medical and dental expense indemnity to students injured during *athletics*. Insurance against *injuries* received by athletes in athletic contests has been provided by voluntary nonprofit organizations in the State, but without legal authority. This amendment legal-

izes them and places them under the supervision of the Department of Insurance

Assembly Int 2022—Armstrong, permits the sale of *hypodermic syringes and needles* without written order of a physician. The law which prohibited the sale of syringes has not been enforced and authorities have explained that its enforcement was almost impossible. The Board of Pharmacy proposes to enact a regulation with regard to the sale of syringes which will be equivalent to this law which has been repealed, and will be much more easily enforced.

The following bills the Governor has vetoed

Senate Int 310—Hastings, Assembly Int 322—C D Williams, requiring the reporting of cases of *deaf and hard-of-hearing children* in New York City. New York City requested the Governor's disapproval of this bill on the ground that under its charter of "Home Rule" it has sufficient authority to undertake this work if it desires to do so.

Senate Int 1158—Mahoney, Assembly Int 1420—Mauler, requires one year's *internship* as prerequisite to being granted a medical license. In vetoing this bill the Governor issued the following statement:

"This bill requires an internship of not less than twelve months' in a hospital in this country or Canada, approved and registered as maintaining at that time a standard satisfactory to the Commissioner of Education and the State Board of Medical Examiners, before candidates may be admitted to the medical licensing examination.

"The Board of Regents does not approve the bill and the Department of Education has written to me in opposition to it.

"There is no question but that an internship is a desirable educational experience in preparing for the practice of medicine. At the present time nearly all graduates in medicine take one or two years' internship and those who do not do so enter laboratory work or scientific pursuits in which an internship would have relatively little practical significance.

"The bill would mandate something which is already being done voluntarily and would impose a disproportionate and unnecessary expense upon the State. In commenting upon this aspect of the bill, the Department of Education points out:

"The bill places upon the Commissioner of Education the responsibility for the approval and registration of hospitals in which medical graduates shall serve their internships. If this responsibility were to be discharged in any but a perfunctory manner, the Department would be compelled to establish standards regarding hospital equipment, personnel and procedures, and to inspect not only every hospital in the State of New York but hospitals outside the State throughout the United States and Canada as well. It may be urged that the list of approved hospitals of the American Medical Association might be accepted so far as that list affects out-of-State hospitals. It should be noted, however, that the authorities of those states now requiring an internship by law have refused to accept as their own the list of the American Medical Association. This would seem to indicate

that it would be improper for New York to accept the Association list as it applies to out-of-State hospitals. It would, therefore, be necessary to include in the program of inspection not scores but hundreds of institutions.

"This is a task for the accomplishment of which the Education Department has no present staff. In fairness to the institutions, inspections could not properly be conducted by uninformed laymen. The services of professional people would be indispensable. The salaries of this staff together with the minimum necessary traveling expenses and other inescapable expenses could not be less than \$30,000 per year. This is a most conservative estimate. Since the bill provides no appropriation to defray the cost of its administration, an appropriation of not less than the amount suggested above would be necessary before the Department could begin to fulfill its duties under the terms of the bill."

"The bill, therefore, not only makes mandatory a practice which by voluntary action is already well nigh universal, but it imposes upon a state department a responsibility which would be expensive to fulfill and which, when fulfilled, would not materially alter the existing situation."

"The bill is disapproved."

Assembly Int. 150—Goldstein, to permit the examination of *hospital records* by injured person or his legal representative, was disapproved.

*Federal Legislation*—The Wagner *National Health Insurance Bill*—S 1620, has apparently been shelved for this year.

The Wagner-George *National Hospital Bill*—S 3230, is however receiving much attention and a complete report of hearings given this bill was printed in the *Journal of the American Medical Association* of April 6, 1940.

Senator Taft of Ohio has introduced an amendment, really a substitute, which incorporates many of the important suggestions which medical and hospital organizations presented at the hearings. Under this amendment \$10,000,000 is appropriated for each of five years beginning July 1, 1940, to provide for defraying the operating cost of added facilities, training and instruction of personnel which will be required in connection with the hospitals. Authorized sums are to be paid to the states which have submitted plans approved by the Surgeon General. The state plans are to provide:

(1) Financial participation by the state or governmental division in which the hospital is located.

(2) Administration of the plan by the state health agency.

(3) Methods of administration include maintenance of personnel standards on merit basis, standards for institutional management, and remuneration for such management, after consultation with professional advisory committee created by the state.

(4) Ownership of real estate, improvements, and equipment are to be vested in the state.

(5) A system of financial support.

(6) Advisory council or councils.

(7) For the payment of laborers and mechanics in the construction of a hospital.

The bill provides for the creation of the National Advisory Hospital Council to consist of the Surgeon General as chairman and eight members appointed by the Surgeon General with approval of the Federal Security Administrator. The duties of the Council are to advise the Surgeon General with regard to

(1) The formulation of standards which are necessary to secure the construction of proper buildings and the securing of proper equipment.

(2) Method by which personnel may be trained

(3) Standards and principles to be considered in approving any state plan. Any state or governmental subdivision within any state may submit a plan.

Whenever the Surgeon General finds that there is failure to comply with any requirement, he shall notify such state agency that further payments will not be made until he is satisfied that there is no longer any such failure to comply. The term "hospital" includes health, diagnostic and treatment centers, the equipment thereof, and facilities relating thereto.

Congressman Tolan of California introduced a bill H.R. 8963, which would authorize *chiropractors* to treat government employees under the Government Compensation plan. There is apparently much opposition to this bill and from sources which will insure that the opposition will be well considered.

*General*—During the last year we have made unusual efforts to acquaint some members in each county society with legislation as it has been proposed at Albany and in Washington. We have sent our bulletins not only to the chairmen of the county committees, but also to all members of the committees. We have invited discussion and comments, even going so far as to enclose with the bulletin a blank response sheet on which were listed the numbers of the bills announced in the bulletin. By means of our bulletins we have reported step by step, the progress the bills made, if any. Our object in issuing the bulletins is not simply to provide information but principally to secure cooperation from the county committees, and we are sorry that our records do not show that our efforts met with deserved success. A bill in which we were most vitally interested, namely the *Radiology Bill*, depended for its advancement upon a widespread demand for its enactment. We believe that the physicians in every section of the State should have been sufficiently interested in the bill to ask their legislators for its support, but we are convinced that no such widespread demand was manifested. In the Assembly the bill was referred by the Committee on Education to the Committee on Rules, which held it without action until the close of the session. In the Senate the bill remained in the Committee on Education. In either instance we are convinced that had a majority of the members of those committees been fully persuaded that the physicians in their districts seriously wanted the bill enacted favorable action would have been taken.

Our report would not be complete without a hearty expression of thanks to the members of the state and county woman's auxiliaries for the intelligent interest they showed in legislative affairs. The State Chairman called at the

Albany office repeatedly to get a clear idea of the bills that we were following in order that she might discuss them with the county auxiliaries that she was invited to address and also to discuss them before a Woman's Forum that is held weekly in the Capitol at Albany. Although this year, no emergency for immediate action arose, as occurred last year, yet, we know that they made a special effort to arouse interest in the Radiology Bill. Our bulletin was regularly sent to the chairmen of the state and county committees. A Senator who sponsored an undesirable bill, related that he had been taken to task by two members of the auxiliary of his county for his apparent opposition to the physicians. His enthusiasm for the bill seemed to wane after that interview.

We have not failed to listen to advice from the Specialties and have employed their arguments whenever action was required.

Success—and there has been a reasonable amount of success—resulted not only from the efforts of the present year, but more from the accumulated efforts of past years, from the good-will which has been built up, from the increasing confidence in our Executive Officer whom the legislators meet as a friend and of whom they seek advice, knowing that he has a thorough knowledge of the wishes of the profession and that they, the legislators, can depend absolutely upon his word. Our Committee is certain that the majority of physicians are becoming better acquainted with the kindly and earnest consideration and real efforts of the Governor and the legislators on behalf of public health and medical practice. Each county society legislative committee should not fail to avail themselves of this opportunity of informing their legislators of our gratitude.

May the Legislative Committee make a request of the *House of Delegates*?

Occasionally a resolution or a motion, mandatory in nature, is passed. Possibly the resolution has been introduced too late to be sent to a Reference Committee for thorough study of the various angles of the problem and of the possible consequences, or has been passed by the House of Delegates very late in the day, either not being understood or the delegates too tired to care. If all resolutions pertaining to legislative matters had to be presented on the day before action could be taken, with plenty of time for full consideration by a Reference Committee and if possible, not mandatory in nature, but requiring the Legislative Committee to study the problem, and to make full report to the Council for its approval, some difficult and embarrassing situations might be avoided. (The Legislature meets nine or ten months after the House of Delegates. Changed conditions may make action unnecessary or undesirable.)

We wish to acknowledge the loyal assistance of the Council and of the county legislative chairmen and the valuable help from other members.

## Part V

### FINANCE COMMITTEE SECTION 35

The Council has found it useful in the last two years to enlarge the scope of what used to be called a "Budget Committee." This is now named "Finance Committee," which this year was composed of

Dr Edward T Wentworth, *Chairman*  
 Dr Clarence G Bandler  
 Dr Thomas P Farmer (*deceased*)  
 Dr George W Kosmak, *Treasurer (ex officio)*  
 Dr Peter Irving, *General Manager (ex officio)*

Instead of merely preparing a budget for sub mission in June to the Council and thence to the Trustees, this committee has been directed to continue its study of the relative financial needs of the Society throughout the year. In this way the Council has been made aware at all times of developing needs for funds. In the opinion of the Council, this is a sounder and more certain way of carrying out its administrative duties than the former method.

#### DUES YEAR AND FISCAL YEAR

##### SECTION 35

The Council has considered carefully the questions raised during the year as to the wisdom of the amendments placed on the books in 1939 relative to the change of the Dues Year. The Council is of the opinion that it would be well to have Fiscal, Dues, and Calendar years coincide. It has, therefore, drawn up the following amendments and submits them herewith.

*Chapter V—Board of Trustees, Section 2—* Change last sentence by deleting words "July 1," and "June 30 of the following year," and inserting the words "January 1" and "December 31 of each calendar year," making it read

"The fiscal year shall begin January 1 and end December 31 of each calendar year."

*Chapter I—Membership, Section 2—* Change (a), last sentence, by deleting the words "July 1 to June 30 of the succeeding year," and inserting the words "January 1 to December 31 of each year," making it read

"The dues year shall coincide with the fiscal year, January 1 to December 31 of each year."

*Chapter I—Section 2—*

Change (b), first sentence, by deleting the words "December 31," and inserting the words "May 31," making it read

"A member whose dues and assessments are unpaid after May 31 of any current year is not in good standing."

Change (c) by deleting the words "June 30," and inserting the words "December 31," making it read

"A member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both County and State Societies, without notice to such member by "

Delete (d), which now reads "The change of the dues year shall first become operative."

Change (e) by deleting the words "May 1," and "ensuing fiscal," and inserting the words "November 1," and "succeeding," making it read

"Dues and State assessment of a member elected or reinstated after November 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election."

#### DELEGATES

##### SECTION 35

*Other State Societies—*As delegates to the coming Annual Meetings of the Connecticut and

New Jersey Medical Societies (May 22-23, 1940, and June 6-8, 1940, respectively) the Council appointed

The incoming President of the Medical Society of the State of New York, and

Dr Peter Irving, *Secretary*

*Eighth American Scientific Congress—*From the Honorable Cordell Hull, Secretary of State, came an invitation to the Council for the members of the State Society to become participants in the Eighth American Scientific Congress, to be held in Washington, D C, May 10 to 18, under the auspices of the Government of the United States. Also, Mr Hull invited the State Medical Society to send an official representative. On nomination by the President, the Council approved the appointment of Dr O W H Mitchell, of Syracuse. He will attend certain Sections devoted to medical matters. The following is a list of the different Sections that are planned

- I Anthropological Sciences
- II Biological Sciences
- III Geological Sciences
- IV Agriculture & Conservation
- V Public Health and Medicine
- VI Physical & Chemical Sciences
- VII Statistics
- VIII History and Geography
- IX International Law, Public Law, and Jurisprudence
- X Economics and Sociology
- XI Education

#### MEMORIALS

##### SECTIONS 3, 35

*Doctor Charles Stover*, Past-President of the Medical Society of the State of New York, died at his home in Amsterdam, New York, April 9, 1940. In his death, the medical profession has lost one of the most outstanding of members, the city of Amsterdam a loyal, civic-minded, and progressive citizen, and his friends and associates a kindly, lovable, and humane man. Dr Stover was born at Cobleskill, New York, February 28, 1851. He was the son of a minister, prepared for college at Seneca Falls Academy, and, after one year at the Albany Medical College, entered the University of Pennsylvania and was graduated with the class of 1880. He began the practice of medicine the same year in Amsterdam and continued until his death. Never a robust man, he conserved his strength for the large and dependent practice he commanded. His habits were very regular, but he was always ready to answer the call of the sick.

His life was one of intense activity in his chosen profession. Careful, painstaking, very discreet, and deliberate, his art and skill were so blended with a systematized science that they became working rules which to his collective clientele, yielded most satisfactory results. In his civic relations his long career is marked by many incidents showing his public spirit and love for his city and country. The Chamber of Commerce, Montgomery Sanatorium, County Historical Society, Amsterdam Board of Trade, to say nothing of his sincere interest in Tuberculosis and Health activities and the Amsterdam Hospital, all had the benefit of his advice, his wise counsel and active cooperation during his long and fruitful life. Doctor Stover was always a physician and good citizen, but above

all, a gentleman and loyal friend. He had his standards for charity, sincerity, and human kindness and always lived up to established standards. He continued his interest in the State Medical Society throughout the years, and his gentle, kindly smile and ready hand-clasp will be a sincere loss to many friends who mourn his death.

AUGUSTUS J. HAMBROOK, M.D., HERBERT H. BUCKNER, M.D., JOSEPH S. LAWRENCE, M.D.

*Dodor Thomas P. Farmer* served the Medical Society of the State of New York in many capacities from 1927 until his death on April 12, 1940.

He was a delegate from the Onondaga County Medical Society to the State Society from 1927 to 1931. He was Chairman of the Committee on Public Health and Medical Education of the Medical Society of the State of New York continuously from 1927. He was a member of the Council of the Medical Society of the State of New York for the same length of time. He served as a delegate to the American Medical Association from 1933. In 1937 he was Chairman of the Section on Public Health, Hygiene, and Sanitation and in the same year was appointed a member of a Special Committee to confer with the State Hospital Association.

To the medical societies, as to each of the varied activities to which he devoted his time, he gave intelligent interest born of natural talent, preparation, and experience. Educated in the schools of Syracuse he entered Syracuse University and was graduated from the College of Medicine in 1906. After serving internship and residency at St. Mary's Hospital, Brooklyn, and as junior attending physician at the Hudson River State Hospital at Poughkeepsie he returned to Syracuse where he began private practice specializing in gynecology. Early in his medical career he became interested in radium for treatment of malignancy and worked selflessly all the rest of his life for the control of cancer.

His Alma Mater gave him appointments as Instructor, Assistant Professor, Associate Professor, and Professor of Clinical Gynecology. He served on the staffs of St. Joseph's, Syracuse Memorial, University, and Syracuse Psychopathic hospitals and the Syracuse Free Dispensary.

To scientific medical literature his numerous publications have dealt largely with radium therapy and public health.

In 1922 he became Commissioner of Health of the City of Syracuse, a position which he served with distinction for three and one-half years.

During the World War he was a member of the District Examining Board.

He had been President of the Onondaga County Medical Society, of the Syracuse Academy of Medicine, the staffs of Syracuse Memorial and St. Joseph's hospitals and of the Alumni Association of the College of Medicine of Syracuse University. He was instrumental in developing the Pneumonia Control Program in New York State and was a member of the Advisory Committee on Pneumonia Control of the State Department of Health. He gave much attention to the Cancer Control Program of New York State and was a member of the Advisory Committee on Cancer Control of the State Department of Health. He was a Di-

rector of the New York State Committee of the American Society for the Control of Cancer.

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In recognition of his long devotion to public health he was chosen by Mayor La Guardia in 1935 to represent the Medical Society of the State of New York in a study of methods employed in the Scandinavian countries and Great Britain for the control of syphilis and gonorrhea.

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The many qualities which made a fine character, a good citizen, and a fearless yet tactful leader were possessed and developed by Tom Farmer. A selflessness which was both inspiration and fulfillment won him countless friends. From his home, his city, his University, his State, his Country, his influence radiated. Not least among his virtues was his haste to be kind. To the affairs of everyday life he demonstrated in practical application his awareness of the Divine upon this earth.

His contributions to science were worthy his services to medical societies, official and voluntary health agencies and civic enterprises were amazing. To his friends, his patients, and intimates the memory of Dr. Thomas P. Farmer will ever be sacred.

WILLIAM A. Groat, M.D., OLIVER W. H. MITCHELL, M.D., PETER IRVING, M.D.

**SPEAKER FLYNN** This supplementary report of the Council will be referred to Reference Committees on the Report of the Council—Parts I, IV, and V.

Are there any other supplementary reports?  
(There was no response.)

**SPEAKER FLYNN** Is Dr. Townsend here?

**DR. WILLIAM H. ROSS** Dr. Townsend is speaking to the Woman's Auxiliary.

**SPEAKER FLYNN** Thank you! The Chair will call for the report of the President as soon as he comes in.

## 10 Introduction of Delegates from Other State Medical Societies

**SPEAKER FLYNN** Are there any delegates from Connecticut, New Jersey, or Vermont present?

**SECRETARY IRVING** There are delegates appointed from all three of those state societies as follows:

### Connecticut

James D. Gold,  
Bridgeport  
Hugh B. Campbell,  
Norwich

Dr Edward T Wentworth, *Chairman*

Dr Clarence G Bandler

Dr Thomas P Farmer (*deceased*)

Dr George W Kosmak, *Treasurer (ex officio)*

Dr Peter Irving, *General Manager (ex officio)*

Instead of merely preparing a budget for sub mission in June to the Council and thence to the Trustees, this committee has been directed to continue its study of the relative financial needs of the Society throughout the year. In this way the Council has been made aware at all times of developing needs for funds. In the opinion of the Council, this is a sounder and more certain way of carrying out its administrative duties than the former method.

#### DUES YEAR AND FISCAL YEAR

##### SECTION 35

The Council has considered carefully the questions raised during the year as to the wisdom of the amendments placed on the books in 1939 relative to the change of the Dues Year. The Council is of the opinion that it would be well to have Fiscal, Dues, and Calendar years coincide. It has, therefore, drawn up the following amendments and submits them herewith.

*Chapter V—Board of Trustees, Section 2—* Change last sentence by deleting words "July 1," and "June 30 of the following year," and inserting the words "January 1" and "December 31 of each calendar year," making it read

"The fiscal year shall begin January 1 and end December 31 of each calendar year."

*Chapter I—Membership, Section 2—* Change (a), last sentence, by deleting the words "July 1 to June 30 of the succeeding year," and inserting the words "January 1 to December 31 of each year," making it read

"The dues year shall coincide with the fiscal year, January 1 to December 31 of each year."

*Chapter I—Section 2—* Change (b), first sentence, by deleting the words "December 31," and inserting the words "May 31," making it read

"A member whose dues and assessments are unpaid after May 31 of any current year is not in good standing."

Change (c) by deleting the words "June 30," and inserting the words "December 31," making it read

"A member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both County and State Societies, without notice to such member by "

Delete (d), which now reads "The change of the dues year shall first become operative "

Change (e) by deleting the words "May 1," and "ensuing fiscal," and inserting the words "November 1," and "succeeding," making it read

"Dues and State assessment of a member elected or reinstated after November 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election."

#### DELEGATES

##### SECTION 35

*Other State Societies*—As delegates to the coming Annual Meetings of the Connecticut and

New Jersey Medical Societies (May 22-23, 1940, and June 6-8, 1940, respectively) the Council appointed

The incoming President of the Medical Society of the State of New York, and Dr Peter Irving, *Secretary*

*Eighth American Scientific Congress*—From the Honorable Cordell Hull, Secretary of State, came an invitation to the Council for the members of the State Society to become participants in the Eighth American Scientific Congress, to be held in Washington, D C, May 10 to 18, under the auspices of the Government of the United States. Also, Mr Hull invited the State Medical Society to send an official representative. On nomination by the President, the Council approved the appointment of Dr O W H Mitchell, of Syracuse. He will attend certain Sections devoted to medical matters. The following is a list of the different Sections that are planned

- I Anthropological Sciences
- II Biological Sciences
- III Geological Sciences
- IV Agriculture & Conservation
- V Public Health and Medicine
- VI Physical & Chemical Sciences
- VII Statistics
- VIII History and Geography
- IX International Law, Public Law, and Jurisprudence
- X Economics and Sociology
- XI Education

#### MEMORIALS

##### SECTIONS 3 35

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WILLIAM A. GROOT M.D. OLIVER W. H. MITCHELL M.D. PETER IRVING M.D.

SPEAKER FLYNN. This supplementary report of the Council will be referred to Reference Committees on the Report of the Council—Parts I, IV, and V.

Are there any other supplementary reports?

(There was no response.)

SPEAKER FLYNN. Is Dr. Townsend here?

DR. WILLIAM H. ROSS. Dr. Townsend is speaking to the Woman's Auxiliary.

SPEAKER FLYNN. Thank you! The Chair will call for the report of the President as soon as he comes in.

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SECRETARY IRVING. There are delegates appointed from all three of those state societies as follows:

Connecticut  
James D. Gold,  
Bridgeport  
Hugh B. Campbell,  
Norwich



*New Jersey*

Watson B Morris,  
Springfield  
Samuel Alexander,  
Park Ridge

*Vermont*

Clarence H Beecher,  
Burlington

DR. JAMES D GOLD I bring you greetings from the Connecticut State Medical Society. We consider it an honor and a pleasure to be able to attend this meeting (Applause)

SPEAKER FLYNN Any other delegates here from other state medical societies?

(There was no response.)

SPEAKER FLYNN They will probably come in later

The floor is now open for the introduction of resolutions

# 11 American Medical Association—Medical Care Investigation and Report on Needs

## SECTION 51

DR. WALTER P ANDERTON, *New York* This is a resolution introduced by the Medical Society of the County of New York

"WHEREAS, it is claimed that there are many communities throughout the United States without a sufficient number of competent physicians or totally lacking the services of physicians, and

"WHEREAS, there is now an overconcentration of both general practitioners and specialists in many of the metropolitan areas throughout the country, and

"WHEREAS, it would be desirable for this available group of physicians to be afforded an opportunity to provide medical care in communities lacking a sufficient number of physicians, therefore be it

"Resolved, that the delegates of the Medical Society of the State of New York to the American Medical Association be instructed to present to the House of Delegates of the American Medical Association at its next meeting the urgency of this problem and request an investigation and report by its Council on Medical Education and Hospitals and the Bureau of Medical Economics as to the extent of such medical need throughout the country and the means whereby such physicians can be made available if and where they are needed "

SPEAKER FLYNN This will be referred to Reference Committee on New Business A, of which Dr Cunniffe is Chairman.

# 12 District of Columbia—United States Circuit Court of Appeals' Decision

## SECTION 40

DR. WALTER P ANDERTON, *New York* I beg leave, as an individual, to introduce the following resolution

"WHEREAS, the recent decision of the United States Circuit Court of Appeals for the District of Columbia that medicine is a trade within the meaning of the Antimonopoly Laws, and that the American Medical Association, its component societies, and officers may constitute a monopoly in restraint of trade, and in view of the danger that this decision may be upheld and established permanently by the

United States Supreme Court, and that officers and members of the American Medical Association may be tried and sentenced as criminals under such a ruling, be it

"Resolved by this House of Delegates of the Medical Society of the State of New York

"1 That this Society hereby record its strongest possible protest against the above mentioned decision and pledge its utmost support to the American Medical Association and all its branches and officers, local, state, and national, because we believe the practice of medicine and surgery is a learned profession and not a trade,

"2 That we endorse the platform of the American Medical Association as published weekly in the *Journal of the American Medical Association*, and

"3 That we reaffirm our belief in the principle that the patient should have freedom to choose his physician from among those licensed to practice in his state, territory, or the District of Columbia, unhampered by restrictive combinations "

SPEAKER FLYNN This will be referred to the Reference Committee on New Business C, of which Dr Masterson is Chairman.

# 13 House of Delegates—Sessions, and Amendment

## SECTION 50

SECRETARY IRVING I have a resolution, sir, to present

"WHEREAS, in recent years the amount of business before the annual meetings of the House of Delegates has steadily increased, and "WHEREAS, this cuts down the amount of time that reference committees can take to prepare their reports, unless they are absent from the meeting of the House which is very undesirable, and

"WHEREAS, there are disadvantages in continuing the Monday session throughout the whole day, morning, afternoon, and evening, therefore be it

"Resolved That the Council study this matter and make suggestion to the 1941 House of Delegates as to how best to rearrange its sessions, and be it further

"Resolved That the House entertain the following suggested amendment to the Bylaws

"Chapter III, Section 4, the first sentence shall be altered by the substitution of the words 'last day' for the words 'second day' making the first sentence of Section 4 read 'The first order of business on the last day of the session of the House of Delegates of each annual meeting shall be the nomination for officers of the Society and other members of the Council, a member of the Board of Trustees, delegates to the American Medical Association, and the appointment of a sufficient number of tellers by the Speaker' "

SPEAKER FLYNN This will be referred to the Reference Committee on New Business A, of which Dr Cunniffe is the Chairman.

# 14 House of Delegates—1941 Session and Sessions Amendment

## SECTION 50

SECRETARY IRVING I have another short resolution, sir, which bears on that one

"WHEREAS, there will come before the House in 1941 an amendment relating to change of sequence of its Sessions, and  
 "WHEREAS, it would seem wise to have the amendment, if passed, go into operation in 1941, therefore be it

"Resolved, that this suggested amendment be considered as the first order of business on the opening session after the resolution period is over"

SPEAKER FLYNN This will be referred to the Reference Committee on New Business A, of which Dr. Cunniffe is the Chairman

#### 15 Amendment—Membership and Dues

##### SECTION 35

DR. THOMAS B. WOOD, *Kings* This is a resolution from the Medical Society of the County of Kings

"Amend the amendment to Chapter I, Section 2 of the Bylaws as proposed by the Council

"Change (e) by deleting the word 'November' and inserting the word 'October,' making it read

"'Dues and State assessment of a member elected or reinstated after October 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election'"

I move the adoption.

SPEAKER FLYNN That is out of order for, of course, this being an amendment to the Bylaws, must be held over for another year before it can be acted upon.

DR. WOOD It can only be acted upon next year?

SPEAKER FLYNN Yes, being an amendment to the Bylaws

Are there any further resolutions?

#### 16 Welfare Law—Proposed Amendment for Free Choice of Physician and Place of Treatment

##### SECTION 44

DR. LAURANCE D. REDWAY, *Westchester* This is a resolution introduced by the Medical Society of the County of Westchester

"WHEREAS, the right of any individual to choose his own physician has been accepted by custom and acknowledged by usage, and

"WHEREAS, the Public Welfare Law, in Article X, Sections 83 and 84, defines the responsibility of the public welfare district for the provision of medical care without specific affirmation of the right of individuals affected to a free choice of physicians, so that in practice this right is frequently abridged disregarded or nullified\*, and

"WHEREAS, the Public Welfare Law, Article XII, Section III, states: 'The religious faith of children shall be preserved and protected'

thereby disclosing the intention of the Legislature that, with respect to the Public Welfare Law in general, the civil rights of individuals affected shall not be infringed, and

"WHEREAS, in other legislation affecting the

public practice of medicine, viz., Chapter 258 of the Laws of 1935, amending the Workmen's Compensation Law, the legislature specifically recognized the right of an individual to the free choice of his physician as in Section 13-a, 'Selection of authorized physician by employee (1) an injured employee may, when care is required, select to treat him any physician authorized by the commissioner to render medical care under this chapter', and

"WHEREAS, this specific reservation of the civil right of 'an injured employee' to select his own physician discriminates unjustly, unfavorably, injuriously and inequitably against other individuals equally and as urgently in need of medical care of a like standard and quality, merely because they suffer from the fortuitous circumstance of illness rather than injury, and

"WHEREAS, respecting Chapter X, Sections 83 and 84 of the Public Welfare Law, 'A statute which is opposed to the spirit, intent and purpose of the constitution is as much within the condemnation of the organic law as though the intention to violate the constitution were written in bold characters on the face of the statute itself', and

'WHEREAS, Chapter X, Sections 83 and 84 of the Public Welfare Law, by omission of the statement of the right of the individual to a free choice of physician, is in practice unjust, discriminatory, and in violation of the spirit and intent of the Constitution of the State of New York, being a violation of the civil liberties of residents of the State, and a menace to the proper and free science, art and practice of medicine within the state, therefore be it

"Resolved, that the Medical Society of the State of New York take such steps and adopt such measures as may be necessary and proper to the end that appropriate legislation may be obtained amending Sections 83 and 84 of Article X of the Public Welfare Law in such a manner and to such an extent as to enable any sick person entitled to receive treatment under said section to select, for continuance of any medical treatment or care required, any physician duly licensed in the State of New York. Such care may be given in the person's home or other suitable place. When such medical service is rendered in hospitals or dispensaries, the right of free choice of physician shall be exercised by the sick person subject to the rules and regulations governing the conduct and operation of such hospitals and dispensaries"

SPEAKER FLYNN This resolution will be referred to Committee on New Business B, the reference committee of which Dr. Moore is Chairman.

#### 17 Address by the President

##### SECTION 39

SPEAKER FLYNN The Chair recognizes the President, Dr. Terry Townsend. I would like to have Dr. Bandler and Dr. Kopetzky escort the President to the platform.

(The delegates rose and applauded as Drs. Bandler and Kopetzky escorted President Townsend to the platform.)

PRESIDENT TOWNSEND This is a blitzkrieg! (Laughter) I had no idea I was supposed to get

\*Constitutional Laws of New York, Rules of Interpretation 1-10. In *People v. Howard* (1878) 155 N. Y. 279, 45 N. E. 776, 41 L. R. 4238 affirming 17 App. Div. 195, 45 N. Y. S. 247 the court said: "When the main purpose of a statute or of part of a statute is to evade the prohibition by effecting indirectly that which cannot be done directly the act is to that extent void, because it violates the spirit of the fundamental law."

up here, but here I am, and it is like being a figure on the stage where you are the only actor, when the curtain opens up and there you stand with stage fright, so you don't say much (Laughter)

I have stage fright I don't know what to say except to assure you of the pleasure of seeing this great organization progress more and more, and ever more solidly and more solidly Each year that passes, each personality that is in this House of Delegates, each one that has gone before, and each one that will come, as they pass through this route they leave behind them the indelible impression of their personalities They leave behind them a definite portion of good That is the only reason that we have gone on for 134 years and are still successfully progressing Each one of you men who has given up hours of your time and immeasurable thought to the good of the public, as expressed through the actions of this body, has left behind him a mound of wealth, which has now increased to a very considerable and impenetrable degree

I am happy to have been associated for these years, and particularly the last year, with a body of this type, of the highest mentality in the profession in our State I, personally, thank you for all the aid you have given in the various projects that I have tried to present, and for your unswerving fidelity, not for me, not particularly for the office which I hold, but for the general good of the general mass I am profoundly grateful for all of this hard work upon your part, and I am most delighted to have had this year of active service in your behalf

Thank you! (Applause)

**SPEAKER FLYNN** The Report of the President is referred to the Reference Committee on the Report of the President, of which Dr Heyl is Chairman

Are there any further resolutions?

### 18 Amendment—Board of Censors

**DR PETER MURRAY, New York** The subject of my resolution is the proposed amendment to Chapter VI of Section 2 of the Bylaws of the Medical Society of the State of New York

"Amend Section 2 of Chapter VI of the Bylaws of the Medical Society of the State of New York by repealing and deleting therefrom the second sentence of said section beginning with the words 'any member' and ending with the words 'Component County Society' and enacting and inserting in lieu thereof, as the second sentence in said Section 2, the following—

"Any member of any Component Medical Society who shall have been disciplined or directed to suffer discipline in any degree by any final decision of his County Medical Society and who shall have exhausted his right of appeal, if any, with any such County Medical Society, feeling aggrieved by the decision of such Society, may appeal to the Board of Censors of this Society from the decision of such Component Medical Society by filing a notice of appeal with the Secretary of this Society and with the Secretary of such Component Medical Society within three months after such final decision by such Component Medical Society"

**SPEAKER FLYNN** According to the Constitution and Bylaws this will remain with the Secretary for a year Is it a notice really?

**DR MURRAY** Yes

**SPEAKER FLYNN** It will be held over for a year and acted upon by the next House Are there any further resolutions?

### 19 Hospital Departments and Medical Boards—Pathology, Radiology, Anesthesiology, and Physical Medicine

#### SECTION 41

**DR IRWIN E SIRIS, Kings** This resolution is being introduced on behalf of the Medical Society of the County of Kings for Dr John J Masterson

"WHEREAS, at a regular meeting of the Kings County Medical Society held March 19, 1940, the following resolution was introduced and passed unanimously

"Be It Resolved, that in order to better serve the hospitals with which they are connected and to improve that service by greater cooperation and understanding, the Joint Council of Pathologists, Radiologists, Anesthesiologists, and Physical Therapy Physicians recommends that all Grade A hospitals shall have physicians, especially trained in Pathology, Radiology, Anesthesiology, and Physical Medicine, in charge of these departments and that the Directors of these departments shall be members of their respective Medical Boards, with the power to vote," and

"WHEREAS, at the same meeting of the Kings County Medical Society their delegates to the New York State Medical Society were instructed to present and support the above resolution, therefore be it

"Resolved, that the House of Delegates of the New York Medical Society at its regular session of May 6, 1940, does hereby approve this resolution, and be it further

"Resolved, that this resolution shall be presented to the House of Delegates of the American Medical Association at its next meeting in New York City, June, 1940"

An amendment has been added to this resolution as follows

"Be It Further Resolved, that in those areas of the State of New York in which the above specialties are not represented by specialists, it shall be permissible for physicians trained in these specialties to represent the specialty on their respective medical boards"

**SPEAKER FLYNN** That resolution will be referred to the Reference Committee on New Business C

### 20 Radio—State Society Broadcasts

#### SECTION 42

**DR B WALLACE HAMILTON, New York** The County of New York would like to introduce this resolution

"WHEREAS, one of the purposes of the Medical Society of the State of New York as expressed in its constitution, is 'to enlighten and direct public opinion in regard to the problems of medicine and health for the best interests of the people of the State', and

"WHEREAS, the radio is one of the most serviceable vehicles for communication of ideas to the public, and

'WHEREAS, the use of this implement by the State Society has been restricted because of lack of funds to operate independently of an already existing agency, now therefore

"The Council of the Society is hereby memorialized that it is the sense of this body that the Public Relations Bureau should undertake the use of radio by an arrangement on its own part with the radio stations, and that the Council is hereby memorialized to appropriate sums of money sufficient for the maintenance of such a project with the approval of the Trustees"

SPEAKER FLYNN This resolution is referred to the Reference Committee on New Business B of which Dr Moore is Chairman

## 21 House of Delegates—Actions and Annual Reports

### SECTION 43

DR. G. C. ADIE, *Westchester* I wish to present a resolution from the Medical Society of the County of Westchester

'WHEREAS, the outcome of activities initiated by the House of Delegates is of importance to the members of the House and to the entire Society membership, and

'WHEREAS, the published minutes of the House of Delegates and the Annual Reports of the Medical Society of the State of New York constitute a permanent record of the Society's activities, and

'WHEREAS, it is frequently difficult to find in the Annual Reports the action taken on matters referred by the House of Delegates in the preceding year, thereby impairing the value of the record, be it therefore

'Resolved, that the Annual Reports of the Medical Society of the State of New York, in matters referred to the Officers, Trustees, or Council for action or study by the preceding House of Delegates shall include a résumé of the recommendations and resolutions with a definite report as to the specific action taken in each instance."

SPEAKER FLYNN This resolution will be referred to Reference Committee on New Business B, of which Dr Moore is Chairman

## 22 Title of "Doctor"

### SECTION 49

DR. GEORGE BAEHR, *New York* I wish to introduce this resolution on behalf of Dr Vincent Faxon, of New York City, and myself

'WHEREAS, the Education Laws of the State of New York provide for the granting of a doctor's degree in podiatry beginning in 1943 to those who have the requisite preliminary education and have completed a course of prescribed instruction of three years' duration, and

'WHEREAS, the multiplication of doctor's degrees in an increasing number of minor subdivisions of the healing arts is confusing the public in regard to the significance of the title of 'doctor', be it

'Resolved, that the House of Delegates of the Medical Society of the State of New York instruct the officers and Council of the Society to use their efforts for repeal or amendment of the State Education Laws in regard to podiatry so as to eliminate the title of 'doctor' for those who practice chirology, and be it further

"Resolved, that the officers and Council of the Society petition the Governor, the Legislature, and the University of the State of New York to the end that the title of 'doctor' be reserved for the learned professions"

SPEAKER FLYNN This resolution will be referred to the Reference Committee on New Business A, of which Dr Edward Cunniffe is Chairman

Are there any further resolutions?

(There was no response.)

SPEAKER FLYNN Dr Podvin will read a few communications that we have received

## 23 Communication from His Excellency, Governor Herbert H Lehman

### SECTION 87

ASSISTANT SECRETARY PODVIN This is dated May 1, 1940, and is addressed to Dr Terry Townsend, President of the Medical Society of the State of New York, and reads as follows

"My dear Dr Townsend

I understand that the Medical Society of the State of New York will hold its annual meeting next Monday, May 6 May I ask you to convey my hearty greetings and good wishes to the officers and members of the Society and their guests

"I need not assure you, I am certain, of my continued very great interest in everything that relates to the health of the people of the State of New York and to the medical profession of the State

'May I also take this opportunity of thanking your organization for the fine cooperation which I have received this year, as on former occasions in connection with the legislation that was passed or introduced at the last session of the Legislature. The memoranda which I received from the Medical Society of the State of New York and many of the county societies were of very great assistance to me in the consideration of the large number of bills affecting the health of the people of the State which came before me. I greatly appreciate the cooperation and assistance which I have received from your organization and the county societies

"With best wishes, I remain,

'Very sincerely yours,

(Signed) Herbert H Lehman"

(Applause)

## 24 Communication from Women's Medical Society of New York State

ASSISTANT SECRETARY PODVIN This is dated May 6, 1940, and is addressed to the House of Delegates of the Medical Society of the State of New York

'Gentlemen

The Women's Medical Society of New York State in Executive Session at its Annual Meeting at the Hotel Waldorf-Astoria, Monday, May 6, 1940, has passed a resolution to ask respectfully that you appoint Dr Emily Dunning Barringer a delegate from New York County to be a delegate to go forward to the House of Delegates of the American Medical Association at its coming meeting in June 1940

"Respectfully submitted,

(Signed) Isabel M Scharnagel, Secretary"

## 25 The American Medical Society Meeting

SECRETARY IRVING A pair of telegrams relating to the subject, one from the Missouri Medical Society and the other from the American Medical Society. In both the President is requested to foster through our delegation the St. Louis for the 1943 Association Convention.

SPEAKER FLYNN Are there any resolutions to be presented at this meeting? (There was no response.) (Speaker Flynn then announced the names of the various reference committee chairmen.)

(Announcement by Dr. Masterson regarding the annual dinner.)

SPEAKER FLYNN Since there are no more resolutions to be introduced, the session will recess until 3:00 P. M. this afternoon and tonight in the main room.

(At 11:30 A. M. a recess was taken.)

## Afternoon Session

Monday, May 1, 1943

The session convened at 1:00 P. M. pursuant to recess.

SPEAKER FLYNN The Session is in order.

The Chair calls for further reports.

## 26 Holding Annual Meeting in New York City

SECTION 69

DR. DEFOREST W. BUCKMASTER A resolution is presented by Dr. Buckmaster that the delegates from Chautauque County be authorized to present the following resolutions:

"1 WHEREAS, the annual meeting of the Medical Society of the State of New York was better attended in New York City than in any other place where, and

"2 WHEREAS, this is the only place where the receipts pay the expenses of the meeting, and

"3 WHEREAS, the facilities for the meetings are superior to any other city, and

"4 WHEREAS, the permanent headquarters of the Society are in New York City and are available,

"Be It Resolved, that New York City be designated as the location for the annual meeting of the Society every year."

SPEAKER FLYNN I will refer this resolution to the Reference Committee on New York City. Dr. Masterson, of Kings, Chairman.

## 27 Amendment—Expenses of Delegates

DR. THEODORE WEST, Westchester County, introduced the following resolution:

"WHEREAS, the President of the Medical Society of New York is by virtue of his office from his district to the House of Representatives and is therefore required to attend the meeting of the House of Delegates, and

"WHEREAS, such attendance involves financial expenditures not provided for in the present Bylaws and must there-

held April 15, 1940, the following resolution was adopted

"WHEREAS, the 1941 convention of the Medical Society of the State of New York was originally slated to be held in Buffalo, and

"WHEREAS, the President-elect, our esteemed Dr James H Borrell has since been called to his reward by the All Highest, therefore be it 'Resolved, that in respectful memory and in tribute to his efforts in behalf of the Medical Society of the State of New York and the Medical Society of the County of Erie the 1941 convention of the State Society be held as planned in the City of Buffalo, and be it further

"Resolved that we, the members of the Medical Society of the County of Erie cordially and sincerely invite the Medical Society of the State of New York to hold the 1941 convention in Buffalo in honor of our departed colleague, Dr James H. Borrell "

SPEAKER FLYNN, I will refer this resolution to the Reference Committee on New Business A, of which Dr Cunniffe is Chairman

### 31 Basic Science Law

#### SECTION 68

DR. CHARLES GULLO, *Livingston* At one of our meetings of the Livingston County Medical Society the following resolution was passed

"WHEREAS, the State of New York has no law regulating the practice of the healing art, except as to the practice of medicine and dentistry, and

"WHEREAS, the healing art should be practiced by men and women who are properly qualified to do so, and

"WHEREAS, the healing art requires a thorough knowledge of Physiology, Chemistry, Pathology, Bacteriology, and Anatomy, be it

'Resolved, that the House of Delegates of the New York State Medical Society approve that its President have introduced to the State Legislature, at its next regular session, a bill to be known as the BASIC SCIENCE LAW, and which shall read as follows

"Title and Organization of Examining Board

Board of Examiners in the Basic Sciences consisting of five members learned in the basic sciences appointed by the Governor from the faculties of the universities and colleges of New York State having four-year college courses Not more than two members may be appointed from any one school. Terms of appointment are four years, staggered

"Preliminary Qualifications Required of Applicants

- 1 Age 21
- 2 Good moral character
- 3 High school education or equivalent.
- 4 Citizenship

"Basic Sciences in Which Applicants Are Examined

Anatomy, Physiology, Chemistry, Pathology, Bacteriology

Examinations Time, Place, Fee, Grade Time and Place

Discretionary with Board

Two examinations a year

Fee \$25 00

Grade 75 per cent in each subject. If

less in one, re-examination in that subject. If less in two or more, no re-examination unless proof is submitted, satisfactory to the Board, of additional study in the basic sciences

#### "Reciprocity Arrangements

Examination may be waived if applicant has passed an examination in the basic sciences in another state before a Board of Examiners in the Basic Sciences, if (1) the requirements of that state are not less than those in New York State for the issuance of basic science certificate and (2) if that state grants exemption to certificants of New York State Board of Examiners in the Basic Sciences

"Fee \$25 00

#### "Ad Does Not Apply to

(1) Christian scientists, dentists, pharmacists, nurses, optometrists, chiropractors, dental hygienists, hydrotherapists, barbers, and cosmetologists, practicing within the limits of their respective callings,

(2) Commissioned surgeons of the United States army, navy, marine or public health service, in the usual performance of their duties,

(3) Regularly licensed physicians or surgeons from outside of State in actual consultation with licensed physicians of New York State,

(4) Persons giving baths, Swedish movements, and exercises,

(5) Retail dealers fitting and recommending arch supports or orthopedic shoes,

"Persons Licensed to Practice the Healing Art in New York State at the Time the Act Becomes Effective'

and be it further

"Resolved, that the President and the Council of the New York State Medical Society be empowered to modify or add any provisions to this bill that they may find necessary "

SPEAKER FLYNN That resolution will be referred to the Reference Committee on New Business B, of which Dr Norman Moore is Chairman.

Are there any further resolutions to be introduced at this time?

(There was no response.)

### 32 Report of Reference Committee on Report of Council—Part IV

DR. FLOYD S WINSLOW The work of this Committee has been threefold (a) legislation, (b) publication, and (c) medical publicity

#### LEGISLATION

##### SECTION 9

Your Committee strongly commends the work of the Legislative Committee of our Society during the past year. It has served the Society intelligently, faithfully, and without remuneration

Your Committee approves that portion of the report that states that "no committee of the county is charged with more important duties than the legislative committee." Legislation concerns the physician with ever increasing importance, and we lend our approbation to the work of those members of the county legislative

committees who have upheld the work of the state legislative committee and the executive officers, by their active participation in the program of the Society. Conversely, we deplore the fact that 32 chairmen of county committees failed to respond in any way to the legislative bills and bulletins forwarded to them, and that 14 of our 61 component county societies failed to respond in any way to the appeals of our executive officer or our state legislative committees.

The success of future legislative programs demands the active participation of every county legislative committee in the future, and we request that the president of each county society sees to it that appointees to such committees be active, earnest members of the Society.

We further request that the officers of each county society impress upon their members the necessity of active participation in the legislative program of the Society.

I move the adoption of this part of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

DR WINSLOW Your Committee extends its approval to the distribution of legislative bulletins by the executive officer of our Society to various interested agencies. Distribution of such bulletins contributes strongly to our program. Your Committee emphasizes that on matters of legislation it is well that medicine should take a unanimous stand. However, we feel that each individual and each county society should be encouraged to furnish his and its viewpoint to the Legislative Committee as a clearing house committee. Your committee recommends that when action is taken by the House of Delegates on legislative matters, that action should be framed in such a way as to give the Council the right and privilege of modifying all such action during the ensuing session of the legislature.

I move the adoption of this part of the Committee's report.

The motion was seconded.

DR ARTHUR J BEDELL, *Albany* I rise to question that authority unless it be somewhat modified. To give the Council blanket power to change any of our basic resolutions I think is dangerous. I believe we should continue to have the referendum if it be necessary, but certainly not place it in the hands of a committee. I speak especially now of your basic resolutions.

DR WINSLOW May I speak on that point?

VICE-SPEAKER BAUER Certainly!

DR WINSLOW The necessity for this action came about through the fact that occasionally the House of Delegates takes a definite action on a subject as long as nine months before the Legislature meets, and in that ensuing period there may have developed such changes in the situation that the action of the previous meeting of the House of Delegates is entirely out of line with the good of the Society. We, therefore, have suggested this change.

VICE-SPEAKER BAUER The report of the Reference Committee is before you for adoption. Is there any other discussion?

DR BEDELL May I be granted the privilege of the floor?

VICE-SPEAKER BAUER If nobody else wishes to speak first, Dr Bedell.

DR BEDELL I still feel that the thought of this House of Delegates could easily be ascertained by referendum or by a special session, fully appreciating the cost of such, but when we reach vital decisions this House should maintain its own prerogative and not pass it to a sub-committee.

VICE-SPEAKER BAUER Is there any further discussion?

(There was no response.)

VICE-SPEAKER BAUER Are you ready for the question?

The question was called for, and the motion was put to a vote by an "aye" and "nay" vote, and as the Chair was in doubt he called for a rising vote, and the motion was lost.

DR WINSLOW Your Committee commends the foresight of the legislative committee in making it possible that certain amendments were necessary to the federal Wagner-George Hospital Bill. This Committee feels that the bill was so worded as to leave loopholes for too great federal participation in the active management of hospitals by local committees.

I move the adoption of that portion of the Reference Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### PUBLICATIONS

##### SECTION 80

DR WINSLOW The experience gained during the two years since the House of Delegates arranged the merger of the *Public Relations Bureau* and the *Publication Department* has convinced your Committee that these departments should be kept separate.

We feel that the JOURNAL is on a sound basis and the method of production and the setup of its staff is sound. We hope for an increase in income from advertising which alone can justify improvements so that with improvement will go a decrease of the JOURNAL cost per member until, if possible, the JOURNAL carries itself.

I move the adoption of this portion of the Reference Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

DR WINSLOW Your Committee has received rough figures as to compilation, printing, binding, and distribution of the *Directory*. While final net results await further sales, it appears that the 1939-1940 edition will have cost about as much per member as in previous years. This edition appeared March 1, 1940, much later than had been hoped. We believe the *Directory* should be published annually rather than every second year, but we recommend that the next edition appear December 1, 1941, an interval in this case of twenty months.

I move the adoption of this portion of the Reference Committee's report.

The motion was seconded.

VICE-SPEAKER BAUER That portion of the Reference Committee's report is before you for consideration. Is there any discussion? The adoption of this portion of the Committee's report involves a recommendation from the Reference Committee that the *Directory* be printed every year, but that the next issue shall not be published until December, 1941.

DR. JOHN J. MASTERSON, *Kings* Does this definitely recommend that after December, 1941, the *Directory* shall be published annually?

VICE-SPEAKER BAUER Yes, that it be published annually according to the recommendation of the Reference Committee.

DR. WINSLOW Yes

There being no further discussion, the motion was put to a vote, and was unanimously carried

DR. WINSLOW This committee has considered further the instruction of the House of Delegates in 1938 for publication of interval *Directory* supplements. It recommends that this method be abandoned. This edition of the *Directory* appears to have been well received probably because of certain definite improvements in its contents

I move the adoption of this portion of the Reference Committee's report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### MEDICAL PUBLICITY

DR. WINSLOW We heartily commend the Council for its wisdom in continuing the medical publicity of the Society, which we believe to be of great importance in the program of the practice of medicine, and to the fulfillment of the Society's main purpose—the maintenance and promotion of public health

The Society faces a double duty, that of helping the practicing physician to educate himself, and in teaching the public how to help in the activities of their medical advisers

For the furtherance of the local use in newspapers throughout the State of material favorable to the medical profession, it is recommended that county medical societies appoint one member to maintain contacts with the press locally, in co-operation with the Public Relations Bureau of the State Society. This is believed to be a more effectual setup than the supervision of such matters by a formal committee of county societies

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried

DR. WINSLOW This completes the report of your Reference Committee on the Report of the Council—Part IV and I hereby move the adoption of the report as a whole.

The motion was seconded

VICE-SPEAKER BAUER The motion is made and seconded to adopt the report as a whole, with the exception of that portion which has already been rejected by the House. Is there any discussion?

There being no discussion the motion was put to a vote, and was unanimously carried

DR. E. C. PODVIN I have several resolutions. Would it now be in order to introduce them?

VICE-SPEAKER BAUER Yes

#### 33 Compulsory Health Insurance for People with Annual Incomes Below \$1,500

##### SECTION 71

DR. PODVIN *Bronx* This is the first resolution from Bronx County

"WHEREAS, many residents of our State are unable to obtain proper medical care because of financial inability to compensate therefor, be it

*Resolved* that the New York State Medical Society go on record as favoring the principle of compulsory health insurance for people whose annual income is below the \$1,500 income level"

VICE-SPEAKER BAUER That first resolution of Bronx County will be referred to the Committee on New Business C, of which Dr. John J. Masterson is Chairman

#### 34 Medical Relief—Proposed Legislation

##### SECTION 70

DR. PODVIN *Bronx* The other resolution reads

"WHEREAS, there are groups of people in our State who by reason of extreme indigency cannot come within the provisions of any form of health insurance (compulsory or voluntary) and therefore constitute a burden upon the medical profession, be it

*Resolved*, that the State Society Legislative Committee be instructed to prepare and introduce appropriate legislation for an adequate health plan to care for this group, and be it further

*'Resolved*, that this legislation include provision for remunerating the participating doctors"

VICE-SPEAKER BAUER This will be referred to the Reference Committee on New Business C of which Dr. Masterson is the Chairman

Are there any further resolutions?

(There was no response.)

Are any other reference committees ready to report?

#### 35 Reference Committee on Report of Council—Part V

##### MALPRACTICE GROUP PLAN INSURANCE

##### SECTION 46

DR. SAMUEL B. BURK Your Reference Committee observes the activity of the Committee on Malpractice Defense and Insurance under the chairmanship of Dr. Clarence G. Bandler, and recommends your approval by giving this Committee your wholehearted support. In explanation this Reference Committee commends it highly for its proved zealous efforts in keeping the cost at its present low rate, fully cognizant of the difficulties in attempting to forecast the expected number of suits and claims. The work in classifying the medical-loss-experience is invaluable as a basis for a reclassification of rates now that the very desirable five-year loss rates period is in the offing

Your Reference Committee feels that it cannot overemphasize the importance of constructive cooperation of all members. Unwarranted or thoughtless criticism of the work of other members must be avoided. The fullest cooperation and assistance should be given wholeheartedly to members in our separate communities wrongfully accused of malpractice and to the legal counsel upon whom rests the burden of their defenses. Solid united action to meet the attacks of unjust claimants in every locality is the only method by which unscrupulous claims can be discouraged. The larger the number of doctors joining this group the lower the cost per



member naturally follows. The relatively low cost of malpractice insurance under the group plan and the benefits derived therefrom should be brought to the attention of the whole Society membership by periodic publicity in the local bulletins and publications of the county societies.

I move the adoption of this portion of the report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### CENTRALIZATION OF OFFICES

DR. BURK. In view of the reasons given by the Council (i.e., the greater convenience of a central location, suitable quarters, the housing of all units on one floor, and most of all the financial gain) your Committee recommends the approval of the change in the location of the Society's offices in the vicinity of Grand Central Station. I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### ANNUAL MEETING ARRANGEMENTS

DR. BURK. Your Committee reviewed the reasons for the discontinuance of the practice of mailing the booklet programs to the entire membership and recommends your approval. I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### DUES YEAR AND FISCAL YEAR

##### SECTION 9

DR. BURK. The Committee acted on the recommendation of the Council before the Treasurer's supplementary report was received by it. However, as this action was in line with that report, I am sure it will be properly adjusted when the report of the other Reference Committee comes in.

After a careful study of the problem and the resolution of the Council reading:

"WHEREAS, the Council of the Medical Society of the State of New York believes that it is impossible to enforce the recent amendment to the Constitution, and

"WHEREAS, this opinion is based upon various written protests from the larger county societies and oral protests registered by the secretaries of other county societies meeting at the Secretaries' Conference, therefore be it

"Resolved, that the Council state that it has no authority or power to act in this situation, but that nevertheless the Council leaves to each county society for its own consideration the decision as to the most practical manner of collection of dues pending reconsideration by the House of Delegates of the amended By-law, Chapter 1, Section 2."

The Committee recommends that ways and means be devised by the Council with the assistance of the Counsel to adjust this matter until appropriate action is taken by the Society. In this connection, the Committee takes into consideration the proposed amendments submitted by the Council relating to changing the fiscal year and dues year to correspond to the calendar year.

Chapter V—Board of Trustees, Section 2—Change last sentence by deleting words

"July 1," and "June 30 of the following year," and inserting the words "January 1" and "December 31 of each calendar year" making it read

"The fiscal year shall begin January 1 and end December 31 of each calendar year."

Chapter I—Membership, Section 2—Change (a), last sentence, by deleting the words "July 1 to June 30 of the succeeding year," and inserting the words "January 1 to December 31 of each year," making it read

"The dues year shall coincide with the fiscal year, January 1 to December 31 of each year."

Chapter I—Section 2—Change (b), first sentence, by deleting the words "December 31," and inserting the words "May 31," making it read

"A member whose dues and assessments are unpaid after May 31 of any current year is not in good standing."

Change (c) by deleting the words "June 30," and inserting the words "December 31," making it read

"A member whose dues and assessments are unpaid after December 31 of any current year shall automatically be dropped from the rolls of membership of both county and state societies, without notice to such member by

Delete (d), which now reads "The change of the dues year shall first become operative."

Change (e) by deleting the words "May 1," and "Ensuing fiscal" and inserting the words "November 1," and "succeeding," making it read

"Dues and State assessment of a member elected or reinstated after November 1 shall be credited to the succeeding year, all rights and privileges of membership, however, dating from the time of election."

We are also taking into consideration the amendment submitted by Kings County in making that recommendation.

I move that this part of the report be adopted.

The motion was seconded.

VICE-SPEAKER BAUER. This portion of the report is before you for adoption. It will be understood that this does not amend the By-laws in any particular, but the recommendation merely carries with it approval of the Council's action, as the Bylaw amendment must be held over for a year before it can be acted upon by the House.

There being no discussion, the motion was put to a vote, and was unanimously carried.

#### FINANCE COMMITTEE

##### SECTION 9

DR. BURK. Your Committee reviewed the change made by the Council in changing the "Budget Committee" to a new name "Finance Committee" which this year was composed of

Dr. Edward T. Wentworth, *Chairman*

Dr. Clarence G. Bandler

Dr. Thomas P. Farmer (*deceased*)

Dr. George W. Kosmak, *Treasurer (ex officio)*

Dr. Peter Irving, *General Manager (ex officio)*

Instead of merely preparing a budget for submission in June to the Council and thence to the Trustees, this committee has been directed to continue its study of the relative financial

needs of the Society throughout the year. In this way the Council has been made aware at all times of developing needs for funds. In the opinion of the Council, this is a sounder and more certain way of carrying out its administrative duties than the former method.

The approval of this change is recommended. I so move.

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried.

#### COUNTY SOCIETY TRANSFERS

Your Reference Committee appreciates the economic strain associated with depriving the receiving Society of some financial gain when a member is transferred from one county medical society to another, and takes into consideration the definition of counsel of a member 'in good standing.' It recommends that this ruling be upheld.

There are many questions involved here in the financial setup of the different societies, and it therefore should be studied by the incoming Council.

I so move.

The motion was seconded, and as there was no discussion, was put to a vote, and was unanimously carried.

#### CONTRACT PRACTICE REVISION OF PRINCIPLES OF PROFESSIONAL CONDUCT

DR. BURK. In view of the request of the Special Committee on Revision of Principles of Professional Conduct for more time to study that subject, your Reference Committee recommends that the Society withhold its definition of contract practice until the Special Committee reports.

I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### EICHACKER VS NEW YORK TELEPHONE COMPANY

DR. BURK. Because of the widespread importance of this matter your Committee recommends the approval of authorization of legal counsel, Mr. Lorenz J. Brosnan, taking over the appeal of Dr. Eichacker's case if this course should be agreeable to Dr. Eichacker and his attorney. Furthermore, it was understood that if Dr. Eichacker's attorney wants to act as an associate to Mr. Brosnan no legal fee is to be paid the attorney by the State Society. I so move.

The motion was seconded and as there was no discussion it was put to a vote, and was unanimously carried.

#### DISTRICT BRANCHES

DR. BURK. The work of the State Executive Officer, Dr. Joseph S. Lawrence, is a commendable attempt to bring about a better and closer relationship between neighboring county societies. The scientific and economic potentialities of this work are extremely valuable.

In view of the present attacks against organized medicine and the numerous attempts to socialize the profession, every possible effort must be used to combat such activities. The district branch meetings could further the work of organized medicine not only with the public, but with members of the profession who may be

too often poorly informed on these subjects.

Your Committee is informed that the activities of the district branches at present consist almost entirely of holding an annual meeting and the report of this event is prepared and submitted to the Secretary of the State Medical Society by the presidents of the district branches. The custom of having each county society elect delegates to district branch meetings should be revived. With the above preface your Committee recommends that the Council appoint a committee to draft a brief constitution and set of bylaws for adoption by the district branches with the approval of these district branches.

The Committee recommends your approval, and I so move.

The motion was seconded.

DR. THEODORE WEST, *Westchester*. I feel that this recommendation on the part of the Committee has a great deal more valuable potentialities in it than probably most of the men realize. The value of the district branch has become practically nil due to having no constitution, no bylaws, or no form of activity that could really be followed or that could direct their work.

We, in the First District Branch, have for the last two or three years tried to integrate the work of the various counties by meetings of representatives of the various counties at different times of the year. It has brought about a great deal better understanding of our problems. Also it has carried back to the various counties the different problems that have come up affecting the economic side of Medicine.

I think that this is one of the best things that could be proposed in regard to the district branches, and will make the district branch a really valuable part of the state organization.

There being no further discussion, the motion was put to a vote, and was unanimously carried.

#### DELEGATES REPRESENTATIVES AND NOMINATIONS SECTION 9

DR. BURK. The Committee recommends the approval of the following:

*Vermont State Society Meeting*

Dr. Leo F. Schiff, Plattsburgh

*Connecticut and New Jersey State Society Meetings*

Incoming President of the Medical Society of the State of New York (Dr. James M. Flynn) and

Dr. Peter Irving, *Secretary*

*Eighth American Scientific Congress* to be held in Washington, D. C., May 10 to 18, 1940, under the auspices of the Government of the United States.

Dr. O. W. H. Mitchell, *Syracuse*

I so move.

The motion was seconded, put to a vote, and was unanimously carried.

#### PHYSICIANS HOME INC.

DR. BURK. I am going to shorten my report somewhat by referring the delegates to page 27, (*Annual Reports' Reprint*) which contains a detailed resolution with reference to the subject matter, and I will summarize it by reading the recommendation of your Reference Committee.

Your Committee feels that there is an important need for this undertaking and deserves your support. Attention is directed to the fact that the line "For Physicians' Home (voluntary) \$1 00" is only a modest attempt to obtain a very small voluntary contribution. We recommend your approval of the recommendation of the Council to grant permission to add this line to the *annual statement of dues*, I so move

The motion was seconded

DR J RICHARD KEVIN, *Kings* I cannot resist this opportunity to say a word about this Home. Together with Dr Morris and a few others I was one of the organizers of this Home. Under the presidency of Gordon Heyd, who is present here, they have made phenomenal success and have progressed rapidly. We, in the earlier hours, wanted the American Medical Association to take it over, but they were not inclined to think that doctors could be in such a desperate plight, so thought it was absolutely unnecessary, however, it is now organized for New York State, and I want to put in a word that it should be uppermost in the mind of every doctor in this state to support this organization. (Applause)

DR CHAS GORDON HEYD, *New York* Mr Speaker and Members of the House, may I take a few minutes to tell you what the Physicians' Home is?

Shortly after the War one of the most distinguished gynecologists in America was absolutely without any resources whatever. In the extreme maturity of his life, he was an indigent, and there flowed from this very pre-eminent example a desire on the part of numerous men, Dr Kevin, Dr Morris, Dr Coleman, Dr Hallock, Dr Einhorn, to mention a few, to create some organization that would secure the maintenance of the conditions of home life to such men, where they would be not inmates but guests of a physicians' home.

It was not easy to get money, and over the years we have carried on this skeleton organization so that today the Physicians' Home is solvent, and it is maintaining at its expense four very distinguished members of the profession under a Miss Conlon in a home at Stamford, Connecticut. It costs our organization about \$26 per person per week.

No one within the range of my voice can say that he may not need such assistance. Here we have a creation of doctors for the purpose of looking after doctors. It is an interesting and rather an anomalous situation that men who ask aid from us have been, at least eighty per cent of them, of the most superior type in our profession, and in their declining years have no one to look out for them no children, no friends, so they must become a public charge.

A few years ago we started an experiment of having a home up in Oneida. That meant organization, meant clerical help, but in a larger measure it took these men away from their habitual environment, so that the idea of a physicians' home has been disbanded in the minds of the present directorate. If and when an application is made to us, we investigate it. If there are people who can support him, applicant, we try and get them to support him, or we take a certain pro rata payment, and we try to place our guests—we like to call them our

guests—in homelike surroundings in or about or near their habitual environment. It would be very cruel to take a man from Erie County and put him in Oneida, or a man from Long Island and put him up in Erie, so that we have for the future the idea of domiciling our guests somewhat relatively near to the environment in which they have passed their lives up to that time.

To date our financial resources have been obtained by voluntary gifts of the members of the profession. Gifts from lay people are few and far between. The Woman's Auxiliary of the State of New York have taken this as one of their major projects, and eleven county divisions of the Woman's Auxiliary sent us a check a week ago for \$500.

If one-half of the membership of the Medical Society of the State of New York contributed \$1 a year, we could take care of every indigent doctor who may apply to us in the future and who has at one time been a member of the State Medical Society. We will not take people outside of the state, although I understand that various state societies throughout the South and West are organizing this sort of a plan.

Last year you may remember that you passed a resolution that the Board of Directors should be selected from a list submitted by your Council, so that the men who run this organization are actually your representatives.

We are asking for the privilege of simply stirring the memory and the associations of the members of this Society to make a voluntary contribution of \$1 00 when they receive their annual statement of dues.

This is a splendid thing, and, while I have appeared before you on many, many occasions, none is quite so dear and near to me as this project, and I urge you to vote for its passage. (Applause)

There being no further discussion, the motion was put to a vote, and was unanimously carried.

#### ELECTION OF TRUSTEES

DR BURK Those of us who know Dr Thomas N Brennan, of Kings County, as a tireless worker for the State Society recommend the approval of his unanimous election to take the place of the late Dr James E Sadlier. I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### MEMORIALS SECTIONS 3 9

DR BURK As to the memorials for

Dr James H Borrell, *Past-President-elect*,  
Dr James E Sadlier, *Past-President*,  
Dr George M Fisher, *Past President*,  
Dr Charles Stover, *Past President*,  
Dr Thomas P Farmer, *Past Chairman* of  
the Council Committee on Public Health  
and Education

the Committee recommends your approval of the action of the Council in spreading suitable memorials on its records and recommends that a suitable set of resolutions prepared by past-presidents or other members of the Society at the direction of the incoming president be sent to their families. I so move.

The motion was seconded, and as there

was no discussion it was put to a vote, and was unanimously carried

DR. BURK Mr Vice-Speaker, this concludes the report of the Reference Committee on the Report of the Council, Section V, and I move the adoption of the report of the Committee as a whole.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

### 36 Report of Reference Committee on Report of the Secretary

DR. LOUIS A VAN KLEECK The Reference Committee on Report of the Secretary wishes to commend the Secretary on his concise yet replete report, and at the same time your Reference Committee feels that the Secretary has reflected only a part of the multitudinous duties and details which are incumbent to his office

#### MEMBERSHIP

We note that 1,108 new members were elected in 1939, and with profound regret the loss by death of 212 members The net increase was 608

We wish to call special attention and offer to the twenty honor county societies our sincere congratulations

#### BIOGRAPHIC REGISTER OF PHYSICIANS

We realize the ever increasing amount of work necessary to compile the biographic record of all physicians, members and nonmembers registered to practice in New York State We, therefore, approve of the increase of the clerical force and feel that this unit should be increased as the necessity requires

The Committee especially notes that the relative proportion of graduates from medical colleges in other states and foreign schools has a definite trend to increase faster than the graduates from the schools within the state. As Dr Joseph S Lawrence has shown in his sixty-year analysis, the ratio of 576 of population per doctor which may indicate that a saturation point may have been reached or passed, the Committee feels that some special attention or future study should be devoted to this important question

#### PRINCIPLES OF PROFESSIONAL CONDUCT TO NEW LICENSEES IN NEW YORK STATE

The Committee voices its approval of that action of the Secretary in writing the letter and sending a copy of the Principles of Professional Conduct to each new licensee in the state

We approve of the Secretary's intention to send each new member a letter of welcome into the Society

#### DIRECTORY DATA

The Committee recommends the approval of indicating the internship record of each physician listed as well as his membership in hospital alumni associations

I move the adoption of this portion of the report

The motion was seconded, and as there was no discussion, was put to a vote and was unanimously carried

#### CENTRALIZATION OF OFFICES

DR. VAN KLEECK The Reference Committee feels that the decision to move the offices to 202 Madison Avenue has proved to be most

logical not only from the geographic location but also from the convenience and concentration of work of the Council as well as the editorial work of the JOURNAL and the Directory and the work of the various committees

#### COUNCIL BULLETINS

The sending of bulletins of the Council proceedings to the component county societies after council meetings should tend to coordinate and facilitate the work of the State Society as a whole as well as bring each county society into closer relation with the State Society

#### ADMINISTRATION POLICIES AND PROCEDURES

The work and accomplishments of the Council and the Council committees have demonstrated beyond doubt the efficiency of this organization, and the Reference Committee can only join with the Secretary its congratulations

The Reference Committee wishes to commend the work done by the committees of the Council and voice its appreciation for its contributions to health and to the relationship of the doctor to his patient

We approve and commend the arrangements proposed by the State Society whereby the indigent and the near indigent may obtain medical care by their own chosen physicians and that these physicians will be suitably recompensed We know that this economic phase of medicine has received most careful consideration and great progress has been made during the past year and that greater progress will be made as time advances We note and wish to commend the Secretary on the aid he has given to committees on the graduate activities public health matters malpractice insurance, and the program for the annual meeting

We wish to make special comment on the work of the Compensation Bureau under Dr Kaliski as its director, and feel that this bureau has had a great economic value to the physicians qualified and working on compensation cases

As the JOURNAL has advanced so favorably during the past year and attained such a high position in medical literature, we wish to congratulate the Publication Committee as well as the Secretary for the discharge of this most important duty

The work of the Bureau of Public Relations under the able Directorship of Mr Dwight Anderson has created for itself an invaluable position in the program of organized medicine and we feel that its activities should be fostered and encouraged

We wish to add our thanks and appreciation to Miss Dougherty and to the clerical staff for their sincerity and the efficient manner in which they have discharged their duties no matter how arduous or exacting they may have been during the past year

I move the adoption of the report as a whole

The motion was seconded

VICE-SPEAKER BAUER You have before you the recommendation of the Reference Committee for the adoption of the report as a whole The second section of the report has not yet been acted on, and we will take that first

DR. VAN KLEECK I will make such a motion

Your Committee feels that there is an important need for this undertaking and deserves your support. Attention is directed to the fact that the line "For Physicians' Home (voluntary) \$1 00" is only a modest attempt to obtain a very small voluntary contribution. We recommend your approval of the recommendation of the Council to grant permission to add this line to the *annual statement of dues*, I so move.

The motion was seconded

DR J RICHARD KEVIN, *Kings* I cannot resist this opportunity to say a word about this Home. Together with Dr Morris and a few others I was one of the organizers of this Home. Under the presidency of Gordon Heyd, who is present here, they have made phenomenal success and have progressed rapidly. We, in the earlier hours, wanted the American Medical Association to take it over, but they were not inclined to think that doctors could be in such a desperate plight, so thought it was absolutely unnecessary, however, it is now organized for New York State, and I want to put in a word that it should be uppermost in the mind of every doctor in this state to support this organization. (Applause)

DR CHAS GORDON HEYD, *New York* Mr Speaker and Members of the House, may I take a few minutes to tell you what the Physicians' Home is?

Shortly after the War one of the most distinguished gynecologists in America was absolutely without any resources whatever. In the extreme maturity of his life, he was an indigent, and there flowed from this very pre-eminent example a desire on the part of numerous men, Dr Kevin, Dr Morris, Dr Coleman, Dr Hallock, Dr Einhorn, to mention a few, to create some organization that would secure the maintenance of the conditions of home life to such men, where they would be not inmates but guests of a physicians' home.

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To date our financial resources have been obtained by voluntary gifts of the members of the profession. Gifts from lay people are few and far between. The Woman's Auxiliary of the State of New York have taken this as one of their major projects, and eleven county divisions of the Woman's Auxiliary sent us a check a week ago for \$500.

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Last year you may remember that you passed a resolution that the Board of Directors should be selected from a list submitted by your Council, so that the men who run this organization are actually your representatives.

We are asking for the privilege of simply stirring the memory and the associations of the members of this Society to make a voluntary contribution of \$1 00 when they receive their annual statement of dues.

This is a splendid thing, and, while I have appeared before you on many, many occasions, none is quite so dear and near to me as this project, and I urge you to vote for its passage. (Applause)

There being no further discussion, the motion was put to a vote, and was unanimously carried.

#### ELECTION OF TRUSTEES

DR BURK Those of us who know Dr Thomas N Brennan, of Kings County, as a tireless worker for the State Society recommend the approval of his unanimous election to take the place of the late Dr James E Sadler. I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### MEMORIALS

##### SECTIONS 3 9

DR BURK As to the memorials for

Dr James H Borrell, *Past-President-elected*,  
Dr James E Sadler, *Past President*,  
Dr George M Fisher, *Past-President*,  
Dr Charles Stover, *Past-President*,  
Dr Thomas P Garner, *Past Chairman* of the Council Committee on Public Health and Education

the Committee recommends your approval of the action of the Council in spreading suitable memorials on its records and recommends that a suitable set of resolutions prepared by past presidents or other members of the Society at the direction of the incoming president be sent to their families. I so move.

The motion was seconded, and as there

was no discussion, was put to a vote, and was unanimously carried

#### ADMINISTRATION POLICIES AND PROCEDURES

DR. HEYL We commend the President for his third recommendation relative to clarification of the concepts regarding structure and function under a tripartite government by the House of Delegates, the Council, and the Trustees, and re state with him

First, the House of Delegates should determine policies and specify the methods by which these policies should be effected giving reasonable flexibility to the Council in the operation of these methods

Second, the Council, after mature study of the problems involved, should carry them to their logical conclusion.

Third, the Trustees should conserve the finances of the Society, but not to the extent of hampering and thwarting the expressed will of the House of Delegates or the mature decision of the Council.

There is ever present the possibility that the Board of Trustees vested essentially with a financial responsibility, may in their zeal to be faithful to the trust reposed in them defeat the will of the House of Delegates and the Council by non-appropriation of funds, a privilege that reposes in the Trustees as constituted This is less likely to happen when the requests placed before them are maturely thought out and clearly presented."

Fourth, the executives, in accordance with instructions from the Council should proceed with executive management of the institution

Since there is a difference between some of the above expressed recommendations and the wording of the Constitution and Bylaws, which at times is not explicit, we direct the attention of the Committee on the Constitution and Bylaws to these confusing directions with the recommendation that they be altered for clarification.

I move the adoption of this portion of the report.

The motion was seconded and as there was no discussion, it was put to a vote, and was unanimously carried

DR. HEYL And now I move the adoption of the report of the Reference Committee on the Report of the President as a whole.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### 40 Report of Reference Committee on New Business C on District of Columbia—United States Circuit Court of Appeals Decision

##### SECTION 12

DR. JOHN J. MASTERSON The first matter before us is the resolution introduced by Dr. Walter P. Anderson, of New York County, reading

"WHEREAS, the recent decision by the United States Circuit Court of Appeals for the District of Columbia that medicine is a trade within the meaning of the Anti-Monopoly Laws and that the American Medical Association its component societies and officers may constitute a monopoly in restraint of trade, and in view of the danger that this decision may be upheld and established permanently by the United States Supreme Court,

and that officers and members of the American Medical Association may be tried and sentenced as criminals under such a ruling, be it "Resolved, by this House of Delegates of the Medical Society of the State of New York

"1 That this Society hereby deplores the above mentioned decision and pledges its utmost support to the American Medical Association and all its branches and officers, local, state, and national, because we (believe) the practice of medicine and surgery is a learned profession and not a trade."

That paragraph originally stated that this Society hereby records the strongest possible protest against the above mentioned decision, and we changed it to read, "That this Society hereby deplores," etc.

"2 That we endorse the platform of the American Medical Association as published weekly in the *Journal of the American Medical Association*, and

"3 That we reaffirm our belief in the principle that the patient should have freedom to choose his physician from among those licensed to practice in his state, territory or the District of Columbia, unhampered by restrictive combinations "

With the change in wording which I have pointed out, the Reference Committee approves this resolution and moves its adoption.

The motion was seconded

DR. ARTHUR J. BEDELL, *Albany* I ask that the Committee think of changing one word there. Instead of using the word 'believe' the practice of medicine and surgery is a learned profession and not a trade, I ask that we put the word 'know' in instead. (Applause)

SPEAKER FLYNN Will that be agreeable to your Reference Committee?

DR. MASTERSON Yes, that will be

SPEAKER FLYNN It, therefore, becomes part of the original motion.

There being no further discussion, the motion was put to a vote, and was unanimously carried

#### 41 Report of Reference Committee on New Business C on Hospital Departments and Medical Boards—Pathology, Radiology, Anesthesiology, and Physical Medicine

##### SECTION 19

DR. JOHN J. MASTERSON The next matter referred to our Committee was the resolution introduced by Dr. Irwin SIRS, of the Medical Society of the County of Kings

WHEREAS, at the regular meeting of the Kings County Medical Society held March 19, 1940, the following resolution was introduced and passed unanimously

"Be It Resolved, that in order to better serve the hospitals with which they are connected and to improve that service by greater cooperation and understanding, the Joint Council of Pathologists Radiologists, Anesthesiologists, and Physical Therapy Physicians recommends that all Grade A hospitals shall have physicians, especially trained in Pathology, Radiology, Anesthesiology and Physical Medicine in charge of these departments, and that the Directors of these departments shall be mem-

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

**DR. VAN KLEECK** Now I renew my motion to adopt the report of the Reference Committee as a whole.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

### 37 Report of Reference Committee on the Report of the Board of Censors

**DR. LOUIS A. VAN KLEECK** In the matter of an appeal by a member of one of the component county medical societies from a decision of that County Society was heard on December 14, 1939

This member had in 1939 preferred charges against a fellow-member for violation of Section 15 of the Principles of Professional Conduct

The County Society had on trial acquitted the defendant, the plaintiff appealed from this decision.

As the Board of Censors has complied with all the legal rights of both the defendant and plaintiff and has rendered a fair and just decision, the Reference Committee therefore approves and commends the action and decision of the Board of Censors

I move the adoption of this report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

### 38 Report of Reference Committee on Report of District Branches

**DR. LOUIS A. VAN KLEECK** The work and meetings of each district branch have been most ably reported by the respective district branch presidents. The Reference Committee regrets that time and space do not allow the consideration of the report of each district branch president separately

The regular annual meetings have had an excellent attendance, however, continued publicity and encouragement should be given the branches to induce more physicians to attend their meetings

The programs have been of high scientific standard and well diversified and have furnished valuable assistance and education to the practicing physician as well as the specialist.

The attendance at branch meetings affords the members of the State Society an opportunity to become better acquainted with the State officers as well as their own professional colleagues, thus greatly assisting in the coordination of the interests and work of the State Society

We wish to voice our appreciation and gratitude to all who have so willingly participated in the program of each meeting and also to the President of the State Society, Dr. Townsend, the Secretary, Dr. Irving, and also Dr. Lawrence for the many meetings they have attended

To each district branch president we extend our sincere appreciation and commend him most highly for his contribution to organized medicine

We recommend that every assistance and as much financial aid as possible be given to the district branches so that their work may progressively increase.

### MEDICAL EXPENSE INDEMNITY INSURANCE SECTION 47

In regard to the two resolutions which were submitted in the report of the Sixth and Eighth District Branches concerning medical indemnity insurance, your Committee feels that the matter has been thoroughly investigated and reported upon in the Report of the Council, and thereby referred to the proper reference committee.

I move the adoption of this report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

### 39 Report of Reference Committee on Report of President SECTION 17

**DR. ARTHUR F. HBYL** Mr Speaker and Members of the House of Delegates, your Committee, after analyzing the President's report, accepts it in general as a praiseworthy record of accomplishment through his individual efforts and the cooperating support of the Council, other officers and personnel of the administrative staff

In particular we wish to mention the tremendous improvement in the *JOURNAL and Directory*, and the accomplishments and increased use of the *Public Relations Bureau*. We concur with the President in asking an unanswerable question relative to plans and proposals indemnifying physicians for *services to indigents*, and re-emphasize his encouragement of physicians to carry their influence for *Preventive Medicine* beyond the sphere of their professional activity to the club, the school, and the public platform

We welcome his statement of this morning relative to the value of the individual effort of every physician and also his repeated expression of thanks for the cooperation he has received during this year of his active service

The report of the President contains three recommendations

#### WOMAN'S AUXILIARIES

The first is concerned with the organization of woman's auxiliaries in counties where they are not yet operating. Your Committee recommends that the formation of woman's auxiliary units be given serious consideration by each county society

I move the adoption of this portion of the report

The motion was seconded, and as there was no discussion, was put to a vote, and was unanimously carried

### MEDICAL EXPENSE INDEMNITY INSURANCE

**DR. HBYL** The second recommendation relative to medical expense indemnity insurance "that such committees be appointed by the President as may be necessary to assist and advise our members in forming insurance groups throughout the State" has been altered by our recommendation that committees be formed by each county society to serve in an advisory and informative capacity with relation to the membership in each county. These local committees should serve in a close relationship to the Council Committee on Public Relations and Economics

I move the adoption of this portion of the report

The motion was seconded, and as there

thereby disclosing the intention of the Legislature that with respect to the Public Welfare Law in general, the civil rights of individuals affected shall not be infringed, and "WHEREAS in other legislation affecting the public practice of medicine, viz Chapter 258 of the Laws of 1935, amending the Workmen's Compensation Law the legislature specifically recognized the right of an individual to the free choice of his physician as in Section 13-a 'Selection of authorized physician by employee (1) an injured employee may when care is required, select to treat him any physician authorized by the commissioner to render medical care under this chapter' and

"WHEREAS, this specific reservation of the civil right of an injured employee' to select his own physician discriminates unjustly unfavorably, injuriously and inequitably against other individuals equally and as urgently in need of medical care of a like standard and quality, merely because they suffer from the fortuitous circumstances of illness rather than injury, and

"WHEREAS, respecting Chapter X, Sections 83 and 84 of the Public Welfare Law, A statute which is opposed to the spirit, intent and purpose of the constitution is as much within the condemnation of the organic law as though the intention to violate the constitution were written in bold characters on the face of the statute itself \* and

"WHEREAS, Chapter X, Sections 83 and 84 of the Public Welfare Law by omission of the statement of the right of the individual to a free choice of physician, is in practice unjust discriminatory and in violation of the spirit and intent of the Constitution of the State of New York, being a violation of the civil liberties of residents of the State, and a menace to the proper and free science, art and practice of medicine within the state, therefore be it 'Resolved, that the Medical Society of the State of New York take such steps and adopt such measures as may be necessary and proper to the end that appropriate legislation may be obtained amending Sections 83 and 84 of Article X of the Public Welfare Law in such a manner and to such an extent as to enable any sick person entitled to receive treatment under said section to select, for continuance of any medical treatment of care required any physician duly licensed in the State of New York. Such care may be given in the person's home or other suitable place. When such medical service is rendered in hospitals or dispensaries the right of free choice of physician shall be exercised by the sick person subject to the rules and regulations governing the conduct and operation of such hospitals and dispensaries"

The Committee agrees unanimously with the intent of the resolution and suggests that Paragraph 5" be rewritten to read

WHEREAS this specific reservation of the

civil right of an injured employee in industry to select his own physician discriminates unjustly, unfavorably injuriously and inequitably against other individuals equally and as urgently in need of medical care of a like standard and quality merely because they suffer from the fortuitous circumstance of illness or injury rather than compensable injury or illness"

And the Committee suggests that the addition of the words 'or injured' in lines 8 and 16 of the last paragraph of the Resolution be added.

The Committee recommends the adoption of this report as amplified and I so move

The motion was seconded

DR. WALTER D. LUDLUM, *Kings* When we have a preamble and a resolution we take action on the resolution. Now I have listened to several minutes of peroration and I remember only that the resolution says that the State Medical Society shall take such action as to produce certain results. We have not been told as far as I know, what action the Medical Society of the State of New York is going to take. I would move as an amendment to this resolution that the matter be put into the hands of the Council for continued study and recommendation.

DR. KIRBY DWIGHT, *New York* I second that

SPEAKER FLYNN The vote is on the amendment. Is there any discussion of the amendment?

CHORUS What is the amendment?

The stenographer read the following

'I would move as an amendment to this resolution that the matter be put into the hands of the Council for continued study and recommendation'

The question on the amended motion was called for and a vote was taken by "aye" and "nay," but as the Chair was in doubt there was a rising vote, with 12 opposed so the amendment was carried.

SPEAKER FLYNN Now on the motion as amended—

DR. LUDLUM That is unnecessary for my motion was really a motion to commit to some particular committee, and disposes of the matter.

SPEAKER FLYNN You are right

#### 45 Report of Reference Committee on Report of the Council—Part III

##### WORKMEN'S COMPENSATION

DR. JAMES R. REULING, JR. This is a voluminous report, only an abstract of which has been published but your Committee has read and studied the unabridged report and has in the main only approval and approbation to offer. There is very little material that is controversial.

Your Committee would call attention to the small percentage of cases going to arbitration and the fairness of the arbitration.

The *Industrial Dermatoses*, we appreciate is a complicated problem which has been under discussion since 1936. Your Committee approves in principle of the recommendation contained in the unabridged report regarding this subject.

I so move

The motion was seconded and as there was no discussion it was put to a vote, and was unanimously carried.

DR. REULING Attention is called to the change in the law requiring the filing of *C-4 form*

\* Consolidated Laws of New York, Rules of Interpretation 1—Intent. In People vs. Howland (1898) 155 N. Y. 270 49 N. E. 775 41 L. R. A. 838 affirming 17 App. Div. 165 45 N. Y. S. 347 the court said: "When the main purpose of a statute or of part of a statute, is to evade the constitution by affecting indirectly that which cannot be done directly the act is to that extent void because it violates the spirit of the fundamental law."



bers of their respective Medical Boards, with the power to vote, and

"WHEREAS, at the same meeting of the Kings County Medical Society their delegates to the New York State Medical Society were instructed to present and support the above resolution, therefore be it further

"Resolved, that in those areas of the State of New York in which the above specialties are not represented by specialists it shall be permissible for physicians trained in these specialties to represent the specialty on their respective medical boards, be it

"Resolved, that the House of Delegates of the New York Medical Society at its regular session of May 6, 1940, does hereby approve this resolution, and be it further

"Resolved, that this resolution shall be presented to the House of Delegates of the American Medical Association at its next meeting in New York City, June, 1940 "

The Committee approves of this resolution and moves its adoption

DR HARRY ARANOW, *Bronx* Does that make it compulsory on any medical board to put these men on the medical board whether they are needed or not?

DR. MASTERSON No, sir, only recommends

There being no further discussion, the motion was put to an "aye" and "nay" vote, and the Chair being in doubt it was put to a rising vote, and was carried 74 to 25

#### 42 Report of Reference Committee on New Business B on Use of Radio for State Society Broadcasts

##### SECTION 20

DR NORMAN S MOORE On the resolution introduced by Dr F Kimball and Dr W P Anderton, of New York County, reading

"WHEREAS, one of the purposes of the Medical Society of the State of New York, as expressed in its Constitution, is to enlighten and direct public opinion in regard to the problems of medicine and health for the best interests of the people of the State, and

"WHEREAS, the radio is one of the most serviceable vehicles for communication of ideas to the public, and

"WHEREAS, the use of this implement by the State Society has been restricted because of lack of funds to operate independently of an already existing agency, now, therefore,

"The Council of the Society is hereby memorialized that it is the sense of this body that the Public Relations Bureau should undertake the use of radio by an arrangement on its own part with radio stations, and that the Council is hereby memorialized to appropriate sums of money sufficient for the maintenance of such a project, with the approval of the Trustees,"

the Committee is unanimous in its opinion that new uses of the radio be made available to the Public Relations Bureau The Committee leaves the amount of funds expended for this purpose to the Council and the Board of Trustees

We recommend the adoption of this resolution

There being no discussion, the motion was put to a vote, and was unanimously carried

#### 43 Report of Reference Committee on New Business B on House of Delegates—Actions and Annual Reports

##### SECTION 21

DR NORMAN S MOORE On the resolution introduced by Dr G C Adie, of the Medical Society of the County of Westchester, reading

"WHEREAS, the outcome of activities initiated by the House of Delegates is of importance to the members of the House and to the entire Society membership, and

"WHEREAS, the published minutes of the House of Delegates and the Annual Reports of the Medical Society of the State of New York constitute a permanent record of the Society's activities, and

"WHEREAS, it is frequently difficult to find in the Annual Reports the action taken on matters referred by the House of Delegates in the preceding year, thereby impairing the value of the record, be it therefore

'Resolved, that the Annual Reports of the Medical Society of the State of New York in matters referred to the officers, Trustees or Council for action or study by the preceding House of Delegates shall include a résumé of the recommendations and resolutions with a definite report as to the specific action taken in each instance,"

it is the unanimous opinion of the Committee that the publishing of the final disposition of the mandates from the House of Delegates will be of value to the members of the Society at large, and the Committee recommends the adoption of this resolution

#### 44 Report of Reference Committee on New Business B on Welfare Law Proposed Amendment for Free Choice of Physician and Place of Treatment

##### SECTION 16

DR NORMAN S MOORE On the resolution introduced by Dr Laurance D Redway, of Westchester County, reading

"The Medical Society of the County of Westchester is of the opinion that the present Public Welfare Law of New York State with respect to Article X, under which medical service is provided for the poor of the State is antiquated, in practice discriminatory, and in theory probably unconstitutional We think it is in the public interest that these opinions be now thoughtfully examined by this House and, if here upheld, that the Medical Society of the State of New York without loss of time take the necessary steps to amend the law

"The Medical Society of the County of Westchester submits the following

'WHEREAS, the right of any individual to choose his own physician has been accepted by custom and acknowledged by usage, and

WHEREAS, the Public Welfare Law, in Article X, Sections 83 and 84, defines the responsibility of the public welfare district for the provision of medical care without specific affirmation of the right of individuals affected to a free choice of physicians so that in practice the right is frequently abridged, disregarded or nullified, and

WHEREAS the Public Welfare Law, Article XII, Section 3 states The religious faith of children shall be preserved and protected'

thereby disclosing the intention of the Legislature that, with respect to the Public Welfare Law in general, the civil rights of individuals affected shall not be infringed, and

WHEREAS in other legislation affecting the public practice of medicine, viz Chapter 258 of the Laws of 1935, amending the Workmen's Compensation Law, the legislature specifically recognized the right of an individual to the free choice of his physician as in Section 13-a 'Selection of authorized physician by employee (1) an injured employee may when care is required, select to treat him any physician authorized by the commissioner to render medical care under this chapter', and

WHEREAS, this specific reservation of the civil right of 'an injured employee' to select his own physician discriminates unjustly, unfavorably, injuriously and inequitably against other individuals equally and as urgently in need of medical care of a like standard and quality, merely because they suffer from the fortuitous circumstances of illness rather than injury, and

WHEREAS respecting Chapter X, Sections 83 and 84 of the Public Welfare Law A statute which is opposed to the spirit, intent and purpose of the constitution is as much within the condemnation of the organic law as though the intention to violate the constitution were written in bold characters on the face of the statute itself\*, and

"WHEREAS, Chapter X, Sections 83 and 84 of the Public Welfare Law by omission of the statement of the right of the individual to a free choice of physician, is in practice unjust discriminatory, and in violation of the spirit and intent of the Constitution of the State of New York, being a violation of the civil liberties of residents of the State and a menace to the proper and free science, art and practice of medicine within the state, therefore be it

Resolved, that the Medical Society of the State of New York take such steps and adopt such measures as may be necessary and proper to the end that appropriate legislation may be obtained amending Sections 83 and 84 of Article X of the Public Welfare Law in such a manner and to such an extent as to enable any sick person entitled to receive treatment under said section to select for continuance of any medical treatment of care required any physician duly licensed in the State of New York. Such care may be given in the person's home or other suitable place. When such medical service is rendered in hospitals or dispensaries the right of free choice of physician shall be exercised by the sick person subject to the rules and regulations governing the conduct and operation of such hospitals and dispensaries

The Committee agrees unanimously with the intent of the resolution and suggests that Paragraph 5 be rewritten to read

WHEREAS this specific reservation of the

civil right of an injured employee in industry to select his own physician discriminates unjustly, unfavorably, injuriously and inequitably against other individuals equally and as urgently in need of medical care of a like standard and quality merely because they suffer from the fortuitous circumstance of illness or injury rather than compensable injury or illness"

And the Committee suggests that the addition of the words "or injured" in lines 8 and 16 of the last paragraph of the Resolution be added

The Committee recommends the adoption of this report as amplified and I so move

The motion was seconded

DR WALTER D LUDLUM *Kings* When we have a preamble and a resolution we take action on the resolution Now I have listened to several minutes of peroration, and I remember only that the resolution says that the State Medical Society shall take such action as to produce certain results We have not been told as far as I know, what action the Medical Society of the State of New York is going to take I would move as an amendment to this resolution that the matter be put into the hands of the Council for continued study and recommendation

DR KIRBY DWIGHT, *New York* I second that

SPEAKER FLYNN The vote is on the amendment. Is there any discussion of the amendment?

CHORUS What is the amendment?

The stenographer read the following

"I would move as an amendment to this resolution that the matter be put into the hands of the Council for continued study and recommendation"

The question on the amended motion was called for and a vote was taken by "aye" and "nay," but as the Chair was in doubt there was a rising vote with 12 opposed so the amendment was carried

SPEAKER FLYNN Now on the motion as amended—

DR LUDLUM That is unnecessary for my motion was really a motion to commit to some particular committee, and disposes of the matter

SPEAKER FLYNN You are right

#### 45 Report of Reference Committee on Report of the Council—Part III

##### WORKMEN'S COMPENSATION

DR. JAMES R. REULING JR This is a voluminous report only an abstract of which has been published but your Committee has read and studied the unabridged report and has in the main only approval and approbation to offer There is very little material that is controversial

Your Committee would call attention to the small percentage of cases going to *arbitration* and the fairness of the arbitration

The *Industrial Dermatoses* we appreciate is a complicated problem which has been under discussion since 1936 Your Committee approves in principle of the recommendation contained in the unabridged report regarding this subject

I so move

The motion was seconded and as there was no discussion it was put to a vote and was unanimously carried

DR REULING Attention is called to the change in the law requiring the filing of *C-4 form*

\* Consolidated Laws of New York Rules of Interpretation 1—Intent. In *People vs Howland* (1898) 153 N. Y. 270 49 N. E. 775 41 L. R. A. 838 affirming 17 App. Div. 105 46 N. Y. S. 347 the court said When the main purpose of a statute or of part of a statute is to evade the constitution by affecting indirectly that which cannot be done directly the act is to that extent void because it violates the spirit of the fundamental law

within fifteen days rather than twenty days as heretofore and the submission of *progress reports* when requested at intervals of not oftener than three weeks

Your Committee approves of the recommendation made that simplified uniform standards be used by component county societies in rating physicians

I so move

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING The Director of your Compensation Committee is to be complimented in having adopted *regulations* excluding podiatrists, chiroprodists, optometrists, or any persons not in the category of authorized physicians from treating injured workmen except under the active and personal direction of an authorized physician

Progress is apparently being made in regard to the x-ray problem and the Committee approves of its continued study

I so move

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING It is pointed out in the report that *ex-medical policies* may deprive an individual of free choice of physicians and adequate medical care Your Committee recommends that the Director continue his studies looking toward the abolition of ex-medical policies

I so move

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING We concur in the Committee's disapproval of the use of *service organizations*, business agents, or any group arranging for medical care and interposing themselves between the doctor, the employee, and the employer or carrier

I so move

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING The Reference Committee approves the effort of the Committee to bring about a change in the law to permit collection without civil action of *doctors' bills* which were not objected to within thirty days and which are not paid by the employer or carrier

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING We agree with the Committee's report regarding the closer supervision of *Medical Bureaus* by each component county society and further recommend that the regulation be changed to allow the same supervision of *First Aid Stations* by county societies

I move the adoption of this part of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING Large *self-insurers* should be encouraged to comply with the full provisions of the law and the rules and regulations of the Department of Labor Particular attention is called to their occasional failure to pay bills

promptly and to comply with the provisions of the law in regard to arbitration

Your Reference Committee concurs wholeheartedly with the recommendation that the component county societies' workmen's compensation committees utilize the facilities of the State Bureau to the fullest extent in the interest of harmony and uniformity of administration

I move the adoption of this portion of the report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING The Director of the Workmen's Compensation Bureau appeared before your Reference Committee and stated the sixty-odd counties of the State through their compensation boards or committees have cooperated splendidly and should be commended for helping to bring about proper administration of the responsibilities which devolve upon the organized profession under the amended Workmen's Compensation Law in the interest of proper medical care for the injured workers of this State and at a reasonable cost.

Realizing the volume of work as indicated by the various phases of the report, your Committee recommends consideration by the Council of a *full-time director* of the Workmen's Compensation Bureau

I move the adoption of this portion of the Committee's report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. REULING Now I move the adoption of the report of the Committee as a whole

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### 46 Report of Reference Committee on the Report of Legal Counsel

DR. MOSES KESCHNER Your Reference Committee has studied the report of the activities of the Legal Department of the Society for the period from February 1, 1939, to and including January 31, 1940

The report of your Counsel consists of three parts (a) Litigation, (b) Counsel Work, and (c) Legislative Advice

##### LITIGATION

On January 31, 1939, there were pending 441 cases and on January 31, 1940, 420 cases During the past year 191 cases were disposed of, of these 50 were settled, 138 terminated in favor of the defendants and only 3 in favor of the plain tiffs These statistical data attest to your Counsel's efficiency and ability better than your Committee can express verbally

As in previous years your Counsel again warns the members of the Society to refrain from care less criticisms of the professional work of their colleagues Such criticisms uttered possibly thoughtlessly and at times even without malice constitute too frequently the basis for malpractice suits by unscrupulous individuals who are 'out to make easy money' Your Committee endorses your Counsel's suggestion that this warning be brought to the attention of all members of the Society and especially of the younger men and of those who have only recently become members of the Society

According to the report of the Counsel, out of 17,724 members of the State Society during 1939, only 46 per cent were insured against *malpractice* under the *group plan* with the Yorkshire Indemnity Company, whereas in 1936 with a membership of 14,194, 57 per cent were so insured. Your Committee desires to point out that the ever present ambulance chasers and unscrupulous negligence lawyers regard doctors in general as easy potential victims of blackmail and extortion. This makes it imperative that every member of the State Society avail himself of the protection against malpractice suits offered by the Yorkshire Indemnity Company under the supervision of your Insurance Committee.

#### COUNSEL WORK

During the past year your Counsel has prepared, for the State JOURNAL, editorial comments and interesting case reports on malpractice. These editorials and case abstracts are of unusual educational value to the members of the Society and may be regarded as a course in legal medicine, a subject to which very little attention is given in the overburdened curriculums of most medical schools.

Your Counsel also gave many oral and written opinions to those who requested them on various medicolegal problems involving the duties, responsibilities and liabilities of physicians, hospitals, sanitariums, laboratories, and other similar medical agencies. Your Reference Committee is of the opinion that the answers to some of these questions as given by Counsel would be of interest to the membership at large. We would recommend that the answers to such questions be published in abstract form in the JOURNAL. A similar recommendation has already been made by your Reference Committee of 1939.

In addition to these tasks your Counsel, in cooperation with the Committee on Bylaws, examined various proposed amendments to the Constitution and Bylaws of the State Society and of a number of component county societies and has rendered advice and made valuable suggestions in this connection. He has also been in conference and consultation with Drs. Aranow and Kalski in connection with the administration of the Workmen's Compensation Law.

Mr. Clearwater, an associate of your Counsel, has been in consultation with the Joint Committee on Medical Jurisprudence cooperating with the Special Committee of the Bar Association in connection with matters of great legal importance to the medical profession.

In addition to these specifically mentioned activities your Counsel participated in the drawing up of the State Society's lease for its new offices at 292 Madison Avenue, New York City. He also drew the contract of Dr. Lawrence the executive officer of the Society and advised on the advertising matter between the Society and Mr. Kent Lighty. He also attended hearings of the Board of Censors at which appeals from disciplinary measures of two component county societies were heard and determined.

#### LEGISLATIVE ADVICE AND ACTIVITIES

Your Counsel's associate Mr. Clearwater attended the annual conference of the County Legislative Chairmen held in Albany and your Counsel gave advice in respect to pending legislation affecting the medical profession.

A critical survey of the detailed report of the activities of your Counsel discloses abundant evidence that the legal affairs of the Society are unusually well taken care of.

Your Reference Committee wishes to take this opportunity to compliment your Counsel and his associates for their efficiency and continuous effort on behalf of the Society.

I move the adoption of the report of Counsel and the acceptance of the report of the Reference Committee.

The motion was seconded.

DR. WALTER D. LUDLUM, *Kings*. May I ask if this report includes any recommendation. I think it did, and I believe I would criticize the recommendation.

DR. KESCHNER. Yes, there is one recommendation. That recommendation is that some of the questions that are listed—there are about thirty-eight questions—in the Annual Report of Counsel which Counsel answered various members of the county societies, hospital superintendents, laboratories, etc., are of great legal value, and the Reference Committee thought it would be a good educational procedure to have some of these abstracts published in the JOURNAL.

DR. LUDLUM. My impression, Mr. Speaker, was that the recommendation was that all these abstracts be published, and I would offer—if I am correct—a modification that they be published if and when feasible, leaving it to the editor of the JOURNAL to decide when it is feasible. To give a blanket instruction and order that they all be published would be unwise.

SPEAKER FLYNN. Would that be agreeable to your Committee?

DR. KESCHNER. Our Committee had in mind that on whatever we might recommend the thing was after all in the discretion of the editor.

DR. LUDLUM. That should be inserted.

DR. KESCHNER. We thought it would be unnecessary to specifically state that, that it was implied.

DR. LUDLUM. I do not remember exactly how it was expressed but if I was right in my memory the recommendation involved an absolute order to the editor to publish them all. If that is true it should not be accepted by the House of Delegates but should include a qualifying clause.

DR. KESCHNER. The Reference Committee had no idea that this was an absolute demand.

DR. ARTHUR J. BEDELL, *Albany*. I move that that part of the report be re-read.

SPEAKER FLYNN. It does not require a motion. Dr. Keschner will please comply with the request.

DR. KESCHNER. "Your Counsel also gave many oral and written opinions to those who requested them on various medicolegal problems involving the duties, responsibilities and liabilities of physicians, hospitals, sanitariums, laboratories and other similar medical agencies. Your Reference Committee is of the opinion that the answers to some of these questions as given by Counsel would be of interest to the membership at large. We would recommend that the answers to such questions be published in abstract form in the JOURNAL."

DR. LUDLUM. As long as he has "some" in the previous sentence, I think that covers it, though it could have been better worded.

DR. KESCHNER. I think the words cover every fear Dr. Ludlum may have had in mind.

DR AUGUSTUS J HAMBROOK While a lot of those answers might be informative, on the other hand they might not be of matters that others would want to hear I can understand Counsel making answers to questions asked of him specifically, which might be very private matters, and on which the persons involved might not want to have the details published while conceding they are informative On previous occasions we have asked that certain information be published, but I think it should be at the discretion of the legal counsel as to what should be published

SPEAKER FLYNN This involves abstracts, and I do not think any names would be mentioned in them at all

DR KESCHNER Right

There being no further discussion, the motion was put to a vote, and was carried

#### 47 Report of the Reference Committee on Report of the Council—Part II

DR LEO F SIMPSON Your Reference Committee on Report of the Council—Part II respectfully submits the following report

##### MEDICAL RELIEF

SECTIONS 9 39 16 44 34 70

The Council through its Council Committee on Public Relations and Economics, Dr A J Hambrook, Chairman, reports that a definite step in the right direction has been taken with the signing by Governor Lehman of Senate Bill Int 1451 by Mr Mahoney, and its companion bill in the Assembly Int 1806 by Mr Wagner, which makes provision that determination as to medical care necessary for any person applying to public welfare officials shall be made with the advice of a physician

Medical welfare is the most important problem facing the medical profession today The principles governing medical relief service will be the principles under which we will serve the low income groups of tomorrow and possibly the insured patients of the future

What are the general characteristics of a sound medical welfare plan? First, the medical aspects of medical relief should be supervised by the medical profession, second, all physicians should be encouraged to participate in the service by reducing red tape and by local determination of fees, third, there should be the utmost decentralization of control in medical matters, fourth, free choice of physician should be guaranteed, subject to the same regulations for the protection of the patient as are provided under the Workmen's Compensation Law, fifth, the provision of service by city or town physicians serving on salaried contracts should be disapproved, and sixth, clinics served gratuitously by private physicians should not be exploited to avoid payment of fees for service The use of clinics should be governed by medical rather than economic principles

At the present time a chaotic condition exists throughout the State, there is a complete lack of standards, medical or economic, no attempt is made to gage the quality of medical care rendered, and the profession as a whole plays almost no part in the welfare program

Medical men have no authority in the law to maintain professional standards, and they act only in an advisory capacity in a few localities

where welfare officers have sought or accepted their advice. Contract medicine flourishes in a number of districts, and in many other places free choice of physician is arbitrarily limited by welfare officers according to their own preferences or rulings Nearly everywhere decisions on medical questions are commonly made by lay workers The "temporary emergency" scale of medical fees has been frozen into the permanent program No appreciable reduction has been made in the red tape involved in reporting and billing In many communities the majority of physicians refuse to deal with the welfare office, preferring to treat their welfare patients without charge rather than to make out the voluminous reports required to collect a subminimal fee.

General clinics are exploited to the utmost to avoid payment of private fees to the physicians who staff the same clinics No satisfactory standards have been set up to enable persons medically indigent but not eligible for material relief to receive needed medical care as provided by the present Welfare Law

We fail to concur in the Council Committee's published report justifying medical welfare fees less than those paid in Workmen's Compensation cases on the ground that the doctor, in accepting such fees, is only contributing his share to the community's relief burden The doctor already pays his full share of taxes and also contributes substantially through free service in clinics and wards If the Council Committee's reasoning is accepted by the medical profession, the perpetuation of these subminimal fees will be practically invited

The House of Delegates in 1936, 1937, and 1938 has recognized all these conditions and has adopted a series of resolutions looking toward their correction.

Although the Council Committee in charge of these matters has made these proposals known to the State Department of Social Welfare and has apparently made repeated efforts to gain their acceptance, it appears from the Committee's report that an impasse has been reached in these negotiations It seems that a new and even more determined approach must be made to realize our objectives

Despite the paramount importance and the urgency and complexity of this problem, it has been assigned to a standing committee of four members—a committee that has had numerous other major assignments It is small wonder that this committee has not been as yet able to accomplish completely the wishes of the House of Delegates

Your Reference Committee therefore recommends that the House of Delegates reaffirm the policies previously adopted and give due recognition to the importance and magnitude of this problem by establishing a special subcommittee of the Committee on Public Relations representative of various sections of the State We recommend that this special subcommittee be charged with the single duty of negotiating an agreement with the State Department of Social Welfare on a plan of medical welfare service embodying the declared policies of this Society

The Committee recommends the adoption of this portion of the report, and I so move

The motion was seconded

DR WALTER D LUDLUM, *Kings* I am sorry to interrupt, but I think this is a matter of

considerable importance and should not be passed without considerable discussion. It is a very definite recommendation, Mr. Chairman and Gentlemen, and as I understand it reaffirms our previous policies but also calls specifically for the appointment of a subcommittee to do so-and-so, and so-and-so, and so-and-so, which we will reread if the body so desires. Several years ago we reorganized this body so that there should not be multiplication of committees and multiplication of duties. I only wish to introduce discussion and did not even wish to come this far to the platform because I have not enough to say, but I think we should stop and think before, as a House of Delegates, we pass a recommendation specifically ordering the appointment of a specific committee with specific duties.

DR. SIMPSON. May I read that last paragraph?

Your Reference Committee therefore recommends that the House of Delegates reaffirm the policies previously adopted and give due recognition to the importance and magnitude of this problem by establishing a special subcommittee of the Committee on Public Relations representative of various sections of the State. We recommend that this special subcommittee be charged with the single duty of negotiating an agreement with the State Department of Social Welfare on a plan of medical welfare service embodying the declared policies of this Society."

DR. LUDLUM. The subcommittee is to represent various portions of the State and, I assume, is to be a considerable sized committee, having several meetings in New York and elsewhere. This deserves further consideration before being passed. If you wish I will move that this recommendation be referred to the Council for further consideration and study, and if they please, action.

DR. ARTHUR F. HEYL, *Westchester*. In view of the fact that these resolutions, dating back as far as 1936 and adopted by this House of Delegates, led to the culmination of the efforts of this Committee of the Council, without any disrespect at all to those efforts but with a knowledge that finally they failed in accomplishment of resolutions adopted by this House, it seems to me there is no other action open to this House of Delegates except to request a special committee, as this resolution does, for this specific purpose alone.

The context of this resolution brought out the fact that this Committee labored under the burden of other duties. It seems to me that if this House of Delegates is to expect the logical conclusion of resolutions dating back to 1936 and in subsequent years since that time, under that circumstance we have no other course.

SECRETARY IRVING. I had the pleasure and privilege of talking with the Committee when this particular subject was discussed, and there were several angles discussed. I think the general agreement—and I agree with that—was that the subject has great importance, and that it would be well to have a committee which was charged just with this single duty, that that committee should be representative of the State, yes, but it was my own advice that the Council be left to choose how big that committee should be.

We have learned over the years that big committees function with difficulty, little committees function much more readily. The opinions from the State can be readily gathered by having the men recruited on a small committee from different, widely different, areas, so in my own mind I have the conception of a subcommittee, say, of no more than three with the Chairman, Dr. Hambrook with them, and altogether it should work just as our Medical Expense Subcommittee has. Personally, I think that would help the Council in its duty, it would not hinder it, I do not think the costs would be great, and as far as my observation goes in attempting to coordinate the work that the Council sets, I believe it would be a very good idea to settle it right here and now in favor of the special committee.

DR. HEYL. As I recall the reading of this resolution, there was no reference to the size of the committee.

SECRETARY IRVING. None.

DR. EDWARD T. WENTWORTH. What is the sense in sending this back to the Council? The Council has done what it could. If the Council has failed, and the House wishes another approach, why not appoint the committee a committee of the House?

In regard to the distribution of the membership over the State, it strikes me that the intellectual ability and political facility needed have nothing to do with geographic boundaries. The point is to select a man who has the capacity to cope with the civil governmental difficulties that must be overcome to accomplish this end. It is not a matter of not having work done. It is a matter of not having been able to cope with the difficulties involved in the civil government. I disapprove of the recommendation of Dr. Ludlum and speak in favor of the resolution. Dr. Simpson has made.

SPEAKER FLYNN. The question before the House which is immediately pending is not an amendment but a commitment motion by Dr. Ludlum. This motion, of course, has been seconded. Is there any further discussion?

DR. GEORGE BAEHR, *New York*. Of course, this is a most important matter. I should like to speak in favor of what Dr. Wentworth has said for upon the solving of this problem—

CHORUS. Can't hear. Use the microphone.

DR. BAEHR. Of course, this is a most important matter, and one which cannot be decided in the off moments of a committee that is dealing with a great many other problems of a like nature. In order to solve it it will require probably the rewriting of the Public Welfare Laws or the fundamental basis of the Public Welfare Laws of this State.

As you know the difficulty in the administration of the medical provisions of the Welfare Law is due to the fact that the local health districts are responsible for providing or paying for medical care, and it just does not work. Whether the State, as a whole should contribute toward the financial responsibilities of the local welfare district is a matter which requires serious consideration and one on which we cannot express a hurried judgment. Therefore, I am very much in favor of the appointment of a special subcommittee to go into the entire problem of the Public Welfare Law in regard to

the provision of medical care not only for the indigent, the medically indigent, but for those who while able to support themselves are unable to provide themselves with adequate medical care.

**SPEAKER FLYNN** The question is on the motion to commit by Dr Ludlum. All those in favor say "Aye", contrary "No." The motion is lost.

**DR LUDLUM** May I speak again of the original motion? I agree with all that Dr Baehr has said and his predecessors. I think also the resolution is a matter of great importance. The recommendation, as it now stands, I believe is that this House shall appoint a subcommittee?

**SECRETARY IRVING** No.

**DR LUDLUM** What is the recommendation?

**SPEAKER FLYNN** Dr Simpson, will you read it?

**DR. SIMPSON** It reads

"Your Reference Committee therefore recommends that the House of Delegates reaffirm the policies previously adopted and give due recognition to the importance and magnitude of this problem by establishing a special subcommittee of the Committee on Public Relations representative of various sections of the State. We recommend that this special subcommittee be charged with the single duty of negotiating an agreement with the State Department of Social Welfare on a plan of medical welfare service embodying the declared policies of this Society."

**DR. LUDLUM** "Various sections of the State" and that this House establish a subcommittee, therefore, what I arise for at this time is the simple query as to the appointment of that subcommittee. If this House is to establish a Committee I think this House should vote on the membership of such committee or establish that the Speaker shall do it. Committees to represent the activities of the meeting of the House of Delegates are appointed by the speaker, other committees are appointed by the President, if my memory of the Constitution and Bylaws is correct. If the House establishes a committee, the House names that committee.

**SPEAKER FLYNN** Can you straighten us out on that? Who is to appoint the Committee? The Council is, as I understand it.

**DR. SIMPSON** The idea of the Reference Committee, though it is probably not well expressed here, was that the Council should appoint a subcommittee of the Committee on Public Relations and Economics.

**DR. LUDLUM** Very well, that answers my query. I did not understand it, and that is why I raised the objection.

**SPEAKER FLYNN** All those in favor of the adoption of the report of the Reference Committee will say "Aye", contrary, "Nay." There are none, and the motion is carried. Continue, please.

#### MEDICAL EXPENSE INDEMNITY INSURANCE SECTIONS 38, 39, 58, 61

**DR. SIMPSON** Your Committee has studied with great interest the report of the subcommittee of the Committee on Public Relations and Economics, having to do with the study of Medical Expense Indemnity Insurance. The Chairman of this subcommittee is Dr Herbert H. Bauckus.

Enabling legislation was passed last year to permit the establishment of nonprofit voluntary medical expense indemnity insurance organizations, and physicians and laymen may now view such insurance as having, in principle, the full approval and support of organized medicine.

These organizations are designed to provide adequate medical care in the home, in the physician's office, and in the hospital for the low income group in our population.

The committee outlines in detail the legal steps necessary for the incorporation of such an organization and then proceeds to give a tentative basis and to make suggestions for an actual working plan.

The committee realizes the immense difficulty in formulating a complete plan that will be equitable, both to the subscriber and to the physician.

They are working diligently, have accumulated about all of the knowledge on this subject now existent, and are willing to give advice and counsel to any county society studying the subject.

Of the plans already licensed to operate by the State Department of Insurance, one covers the eight counties in the Eighth Judicial District, one the counties centering in Utica, and the third in the metropolitan district. Other plans are in the organization stage in Rochester, Syracuse, and elsewhere.

The Superintendent of Insurance has appointed an advisory committee to confer with him on developments and problems in the medical indemnity field. At this committee's suggestion a group of actuaries has been appointed to set up a uniform system of statistical information to be recommended to the several medical expense indemnity corporations. Only by comparison of experience based on uniform statistics can definite information be made available for the guidance of these medical plans through an unexplored field.

This advisory committee, set up by the Superintendent of Insurance, represents men actually in the operating field of medical expense indemnity.

It is strongly urged that the Subcommittee of Medical Expense Indemnity Insurance of the Council establish contact with the Advisory Committee of the State Department of Insurance for their mutual benefit. It is recommended also that at least two meetings a year be held by the Subcommittee of the Medical Expense Indemnity Insurance of the Council with the Advisory Committee of the State Department of Insurance and with presidents and directors of the various operating plans. No expense shall be borne by the State Society for these meetings except for its own committee.

Your Committee would stress the fact that conditions vary greatly in different localities of so large a state as New York and that no one plan can be expected to meet all the requirements of these several communities. It feels that the provision of the new insurance law, Article IX-C, is a wise one that restricts the operation of any plan to eighteen counties.

Your Committee feels that all the Medical Society of the State of New York should do is to continue to gather all of the information to be gained from study and experience so that it will be available.

The Medical Society of the State of New York should not be in the insurance business. It should approve principles but, as yet, sponsor no plan.

This subcommittee, under Dr. Bauckus, has done very notable work and it should be continued.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried.

#### CRIPPLED CHILDREN PROBLEMS

DR. SIMPSON. There has been some complaint from physicians about the fees allowed by the courts under the Crippled Children's Act. The present fee schedule is apparently not adequate to cover all of the abnormalities now covered by the Act. The Committee has given this matter careful study and is still accumulating advice and data on this important subject.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### CIVIL SERVICE QUALIFICATIONS

DR. SIMPSON. The Council, early in the year, was requested to assist the State Department of Civil Service in developing standard specifications for each class of position of a medical nature. To both Dr. Hambrook's and Dr. Farmer's committees was assigned this special study. It was a very large assignment and required both time and application. Subcommittees were appointed to make an intelligent study, and experts outside of the members of the committee were added. The departments are Public Health, Compensation, Tuberculosis, Labor, Mental Hygiene, in fact, all departments of the State employing physicians.

The study has not been completed at the present time, but detailed reports to the State Department of Civil Service will be ready before long.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### NEW YORK PUBLIC HIGH SCHOOL ATHLETIC ASSOCIATION SECTION 9

DR. SIMPSON. This matter was clarified recently by the Governor signing a bill which authorizes organization of a medical indemnity corporation for furnishing medical and dental expense indemnity to students injured while participating in athletics. This bill was written with the approval and advice of Dr. Hambrook's Committee.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried.

#### AUTOMOBILE ACCIDENTS AND PHYSICAL EXAMINATION OF MOTOR VEHICLE DRIVERS

DR. SIMPSON. Dr. Hambrook's Committee has submitted a tentative list of recommendations to the Bureau of Motor Vehicles which in-

cludes the rejection or the withholding for a time of a license to operate motor vehicles from persons who suffer from certain diseased conditions and deformities. Further, the Committee has made recommendations concerning individuals who have been involved in one or more automobile accidents.

These suggestions seem to be all very well thought out and undoubtedly will be of great aid to the State Bureau of Motor Vehicles.

The Committee has purposely refrained from discussing the problem which has been studied very thoroughly and with great concern, viz., the problem of the driver who is under the influence of alcohol. It believes that although apparently we are on the verge of the inauguration of a test of great accuracy, of adequate scientific backing—one that has been proved that the evidence obtained with it is admissible in the courts of many states of the Union, and one that might be performed by any well-trained police officer—still it did not feel that it should lend the weight of its influence to this or any other method until more authoritative medical, as well as legal, data can be accumulated.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### M. D. LICENSE PLATES

DR. SIMPSON. Apparently this matter is now being adequately cared for, and there will be less inconvenience in the future in the manner of obtaining them.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### SARATOGA SPRINGS COMMISSION

DR. SIMPSON. Members of the Committee on Public Relations and Economics have been asked to act as an advisory body to promote a better understanding of the value of mineral waters as an aid in the treatment of certain physical conditions. We believe that this is a proper function of this committee.

The Committee recommends the adoption of this portion of the report, and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### UNITED STATES FARM SECURITY ADMINISTRATION

DR. SIMPSON. During the last summer the Farm Security Administration sought the State Society's approval for it to contact the county societies in an effort to devise plans for the medical care of the borrowers of the Farm Security Administration. The average family under this plan receives \$300 as a loan for all purposes, and of this amount, \$20 is allotted for medical care. These \$20 allotments are pooled, and the fund thus created is administered by a trustee who is selected by the county medical society. Fifteen per cent of the fund is set aside for hospitalization and the remainder used to pay medical bills as incurred. Clients select their own physician from among those who signify their willingness to give care under this plan.



the provision of medical care not only for the indigent, the medically indigent, but for those who while able to support themselves are unable to provide themselves with adequate medical care

**SPEAKER FLYNN** The question is on the motion to commit by Dr Ludlum. All those in favor say "Aye", contrary "No". The motion is lost.

**DR LUDLUM** May I speak again of the original motion? I agree with all that Dr Baehr has said and his predecessors. I think also the resolution is a matter of great importance. The recommendation, as it now stands, I believe is that this House shall appoint a subcommittee?

**SECRETARY IRVING** No.

**DR LUDLUM** What is the recommendation?

**SPEAKER FLYNN** Dr Simpson, will you read it?

**DR SIMPSON** It reads

"Your Reference Committee therefore recommends that the House of Delegates reaffirm the policies previously adopted and give due recognition to the importance and magnitude of this problem by establishing a special subcommittee of the Committee on Public Relations representative of various sections of the State. We recommend that this special subcommittee be charged with the single duty of negotiating an agreement with the State Department of Social Welfare on a plan of medical welfare service embodying the declared policies of this Society."

**DR LUDLUM** "Various sections of the State" and that this House establish a subcommittee, therefore, what I arise for at this time is the simple query as to the appointment of that subcommittee. If this House is to establish a Committee I think this House should vote on the membership of such committee or establish that the Speaker shall do it. Committees to represent the activities of the meeting of the House of Delegates are appointed by the speaker, other committees are appointed by the President, if my memory of the Constitution and Bylaws is correct. If the House establishes a committee, the House names that committee.

**SPEAKER FLYNN** Can you straighten us out on that? Who is to appoint the Committee? The Council is, as I understand it.

**DR SIMPSON** The idea of the Reference Committee, though it is probably not well expressed here, was that the Council should appoint a subcommittee of the Committee on Public Relations and Economics.

**DR LUDLUM** Very well, that answers my query. I did not understand it, and that is why I raised the objection.

**SPEAKER FLYNN** All those in favor of the adoption of the report of the Reference Committee will say "Aye", contrary, "Nay". There are none, and the motion is carried. Continue, please.

#### MEDICAL EXPENSE INDEMNITY INSURANCE SECTIONS 38 39 58, 61

**DR SIMPSON** Your Committee has studied with great interest the report of the subcommittee of the Committee on Public Relations and Economics, having to do with the study of Medical Expense Indemnity Insurance. The Chairman of this subcommittee is Dr Herbert H Bauckus.

Enabling legislation was passed last year to permit the establishment of nonprofit voluntary medical expense indemnity insurance organizations, and physicians and laymen may now view such insurance as having, in principle, the full approval and support of organized medicine.

These organizations are designed to provide adequate medical care in the home, in the physician's office, and in the hospital for the low income group in our population.

The committee outlines in detail the legal steps necessary for the incorporation of such an organization and then proceeds to give a tentative basis and to make suggestions for an actual working plan.

The committee realizes the immense difficulty in formulating a complete plan that will be equitable, both to the subscriber and to the physician.

They are working diligently, have accumulated about all of the knowledge on this subject now existent, and are willing to give advice and counsel to any county society studying the subject.

Of the plans already licensed to operate by the State Department of Insurance, one covers the eight counties in the Eighth Judicial District, one the counties centering in Utica, and the third in the metropolitan district. Other plans are in the organization stage in Rochester, Syracuse, and elsewhere.

The Superintendent of Insurance has appointed an advisory committee to confer with him on developments and problems in the medical indemnity field. At this committee's suggestion a group of actuaries has been appointed to set up a uniform system of statistical information to be recommended to the several medical expense indemnity corporations. Only by comparison of experience based on uniform statistics can definite information be made available for the guidance of these medical plans through an unexplored field.

This advisory committee, set up by the Superintendent of Insurance, represents men actually in the operating field of medical expense indemnity.

It is strongly urged that the Subcommittee of Medical Expense Indemnity Insurance of the Council establish contact with the Advisory Committee of the State Department of Insurance for their mutual benefit. It is recommended also that at least two meetings a year be held by the Subcommittee of the Medical Expense Indemnity Insurance of the Council with the Advisory Committee of the State Department of Insurance and with presidents and directors of the various operating plans. No expense shall be borne by the State Society for these meetings except for its own committee.

Your Committee would stress the fact that conditions vary greatly in different localities of so large a state as New York and that no one plan can be expected to meet all the requirements of these several communities. It feels that the provision of the new insurance law, Article IX-C, is a wise one that restricts the operation of any plan to eighteen counties.

Your Committee feels that all the Medical Society of the State of New York should do is to continue to gather all of the information to be gained from study and experience so that it will be available.

The motion was seconded

DR. WALTER P. ANDERTON, *New York* Not to criticize this resolution at all but merely to set the record straight this resolution was introduced by an individual and not by the delegation of New York County

DR. CUNIFFE To set this absolutely right, it was introduced by two individuals from New York City They have 'New York City' on here instead of 'New York County'

There being no further discussion the motion was put to a vote, and was unanimously carried

DR. RICHARD KEVIN, *Kings* I am in doubt as to what the result of that last recommendation which we have just adopted is It seems to me the motion was to support the recommendation of the Committee, and that dispenses with the recommendations of the two men who presented the resolution.

SPEAKER FLYNN That is not my understanding of it, but will you set Dr. Kevin straight please?

DR. CUNIFFE We have recommended the adoption of the resolution as submitted except that we have changed the wording of the last sentence, which formerly read

'Resolved, that the officers and Council of the Society petition the Governor, the Legislature, and the University of the State of New York to the end that the title of 'doctor' be reserved for the learned professions'

to read now

'Resolved, that the officers and Council of the Society petition the Governor, the Legislature, and the University of the State of New York to the end that the title of doctor' be properly safeguarded'

Otherwise the resolution is the same, and the committee approved of it as amended and moved its adoption

SPEAKER FLYNN Does that take care of your question?

DR. KEVIN Yes

SPEAKER FLYNN We have already taken care of that. Proceed please!

## 50 Report of Reference Committee on New Business A on House of Delegates—Sessions and Amendment, and 1941 Session

### SECTIONS 13 14

DR. EDWARD R. CUNIFFE In regard to the resolution introduced by Dr. Irving, General Manager of the Medical Society of the State of New York

'WHEREAS, in recent years the amount of business before the Annual Meetings of the House of Delegates has steadily increased, and

WHEREAS, this cuts down the amount of time that Reference Committees can take to prepare their reports—unless they are absent from the meeting of the House, which is very undesirable, and

WHEREAS there are disadvantages in continuing the Monday session throughout the whole day, morning, afternoon, and evening, therefore be it

Resolved, that the Council study this matter and make suggestion to the 1941 House of Delegates as to how best to rearrange its sessions'

Your Reference Committee recommends this

portion of the resolution for adoption, and I so move.

The motion was seconded and as there was no discussion it was put to a vote, and was unanimously carried

DR. CUNIFFE However, a further portion of the resolution reads

'Resolved, that the House entertain the following suggested amendment to the Bylaws

Chapter III Section 4 the first sentence shall be altered by the substitution of the words 'last day' for the words 'second day' making the first sentence of Section 4 read "The first order of business on the last day of the session of the House of Delegates of each annual meeting shall be the nomination for officers of the Society and other members of the Council, a member of the Board of Trustees delegates to the American Medical Association and the appointment of a sufficient number of tellers by the Speaker"'

As this is an amendment to the Constitution it has to be introduced in the House of Delegates and laid upon the table for a year before it can be acted upon This Committee recommends that it be sent back to the Council for rewording in order to clarify its meaning and then be laid upon the table for the ensuing year and acted upon in 1941, according to the provision of our Bylaws

SPEAKER FLYNN As long as notice is given to amend I think that is all that is essential

DR. CUNIFFE That is all that is essential except the Committee felt the wording was not clear 'last day' for 'second day' and so forth

SPEAKER FLYNN As long as notice has been given, it may be reworded subsequently, but it has to be held over for a year before it can be acted on, in other words next year it could be acted upon, even if the wording were changed as long as notice had been given this year

DR. CUNIFFE It has to be reworded and laid on the table for one year It cannot be acted upon at this meeting There is no provision for acting upon an amendment in our Constitution.

DR. SAMUEL J. KOPETZKY, *New York* Since this resolution which was unusual insofar as it contained an amendment to the Bylaws which I believe was simply intended to establish an order of business for the day and since it went unusually to a reference committee, the purposes of the Reference Committee would be served by simply making a recommendation that a special order of business for 1941 be adopted, that is, the special order of business can be adopted unanimously by the House and stands until changed So if it is the purpose of the Reference Committee to favor it for 1941, a special order of business can be adopted not today but at the opening of the 1941 meeting

DR. CUNIFFE A special order of business can be adopted at any time but there is something more than that in this Dr. Kopetzky It says

The first sentence shall be altered by the substitution of the words 'last day' for the words 'second day,' etc., and that is the part that has to be laid upon the table The other part can be taken care of

SPEAKER FLYNN Yes, it involves a change in the Bylaws, so has to be held over a year before

The Farm Security Administration will not accept any osteopath or chiropractor in this list

The usual fee for the region is charged, but it is expected that about 65 per cent of this will be paid, varying according to the demands

The Committee approved the plan, in principle, for action by the Council, viz, that the request of the Federal Security Administration that its representatives be granted permission to contact the county medical societies with the understanding that the State Society will have told the county societies that it has no objection to their undertaking this activity, if they see fit

The Council adopted this policy and so advised the county societies

The Committee recommends the adoption of this portion of the report, and I so move

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### STERILIZATION FOR EXPEDIENCY IN RELIEF CASES

DR SIMPSON Your Committee believes that in this matter the judgment of the Council should be adhered to, viz, that to resort to such a procedure without a therapeutic reason, which cannot be stretched to include economics, is unethical and unwarranted

The Committee recommends the adoption of this portion of the report, and I so move

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR SIMPSON My Committee cannot close without commending most heartily the prodigious amount of diligent and efficient work that has been performed by the Council Committee on Public Relations and Economics, Dr Hambrook, Chairman, also by its Subcommittee on Medical Expense Indemnity Insurance, Dr Bauckus, Chairman

Mr Speaker, I move the adoption of this report as a whole

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### 48 Report of Reference Committee on New Business A on Laboratory Medicine—The Practice by Laymen

##### SECTIONS 28 63

DR EDWARD R CUNIFFE, *Bronx* In regard to the resolution introduced by Dr Chas Gordon Heyd, of New York City, reading

'The following resolution which was submitted by the Kansas State Department of Health and approved by the Surgeon General of the Public Health Service

"Resolved, that the House of Delegates of the Medical Society of the State of New York extend its good offices in suppressing the practice of laboratory medicine by laymen and to use its strong influence toward establishing a proper relationship between the city and state department of health laboratories and physicians who practice pathology, limiting the work of the state and city departments of health to communicable diseases and the care of

indigents Such an effort on the part of the House of Delegates of the State of New York would be consistent with its activities with regard to the practice of other specialties in medicine The House of Delegates suggest that this resolution be submitted to the House of Delegates of the American Medical Association "

The Committee is very much in favor of that portion of the resolution which has to do with suppressing the practice of laboratory medicine by laymen and also favor establishing a proper relationship between the city and state departments of health laboratories and physicians who practice pathology, limiting the work of the state and city departments of health to communicable diseases and the care of indigents in localities where it is feasible However, there are many parts of New York State where the physician has no pathologic service except that rendered by the city and state departments of health, and the adoption of this resolution would therefore deprive him of pathologic services except for those communicable diseases and indigent patients Therefore, at the present time, the Reference Committee disapproves of this resolution, and I recommend the acceptance of the report of the Committee I do so move, Mr Speaker

The motion was seconded, and as there was no discussion, it was put to a vote, and was carried

#### 49 Report of Reference Committee on New Business A on Title of "Doctor"

##### SECTION 22

DR EDWARD R CUNIFFE This is a resolution introduced by the Medical Society of the County of New York, which we have changed slightly in wording to read

WHEREAS, the Education Laws of the State of New York provide for the granting of a doctor's degree in podiatry beginning in 1943 to those who have the requisite preliminary education and have completed a course of prescribed instruction of three years' duration, and

"WHEREAS, the multiplication of doctor's degrees in an increasing number of minor subdivisions of the healing arts is confusing the public in regard to the significance of the title of 'doctor', be it

'Resolved, that the House of Delegates of the Medical Society of the State of New York instruct the officers and council of the Society to use their efforts for repeal or amendment of the State Education Laws in regard to podiatry so as to eliminate the title of 'doctor' for those who practice chiropody, and be it further

'Resolved, that the officers and Council of the Society petition the Governor, the Legislature, and the University of the State of New York to the end that the title of 'doctor' be properly safeguarded "

That last part of the last sentence formerly read "that the title of 'doctor' be reserved for the learned professions," and we have changed it to read "that the title of doctor be properly safeguarded "

With that change, your Reference Committee recommends the adoption of this Resolution, and I so move

a good idea not to ask me what my opinion is in this respect. You cannot do it legally.

DR. KOSMAK Then let us do it illegally. We have not had a vote on it.

SPEAKER FLYNN We do not have to. It is ruled out of order.

DR. HARRY ARANOW What is the result of this resolution? The law is not being enforced because it cannot be done. What is the House going to do about it?

SPEAKER FLYNN We cannot do a thing according to our Constitution and Bylaws.

DR. LOUIS H. BAUER, *Nassau* It is quite true that nothing can be done legally to change this, but I believe that it would be in order if the House were to pass a resolution to this effect that it is the sense of the House of Delegates that it will not consider the Council derelict in its duty if it fails to take disciplinary action against any county society or individual for failure to comply with the present Bylaws, so long as they have complied with the previous Bylaws of January 1 to December 1. That is, perhaps, not strictly parliamentary, but I think it will cover the situation, and I so move.

DR. CHAS. GORDON HEYD, *New York* Mr Speaker, you just cannot pass resolutions here violating the legality of trust funds. There is just nothing to be done but to put it on the table, and next year vote on the change in the Bylaws. I, for one, would not want to vote on anything that affected custodial funds, involving a change in the Bylaws, in the face of what legal counsel has said, that it is illegal. You cannot sit here and make resolutions violating the law.

DR. ARTHUR J. BEDELL, *Albany* Dr Heyd has already said what I had in mind and has answered it more completely than I might have done.

SPEAKER FLYNN You understand then, Gentlemen, it is out of order.

DR. SAMUEL J. KOPEZKY, *New York* I call for the order of the day.

DR. DiNATALE 2 *A careful study of the business setup of the New York Office* in order to develop a more adequate system of accounting and bookkeeping, as well as efficient office routine, both in the general and the publication offices, by a special committee of five, including the General Manager, the Business Manager of the *JOURNAL* and *Directory*, the Treasurer, the Literary Editor, and a member of the Board of Trustees, this Committee to report to the Council at the October meeting. Your Reference Committee approves the recommendation of the Treasurer and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was carried unanimously.

DR. DiNATALE 3 *Vesting the responsibility for the conduct of the JOURNAL and Directory production in a local committee of the Council* consisting of the General Manager, the Business Manager of the *JOURNAL* and *Directory*, the Literary Editor, Treasurer, and a member of the Board of Trustees. This recommendation was concurred in and approved by the Reference Committee on Report of the Council—Part IV. Dr. Floyd Winslow, Chairman. I move the adoption of this portion of the Treasurer's report.

The motion was seconded, and as there

was no discussion, it was put to a vote and was carried unanimously.

DR. DiNATALE 4 *Considering the appointment of a second assistant treasurer*, who shall be principal bookkeeper, adequately bonded and duly remunerated, who shall have no voice in the Council and be under direct supervision and orders of the Treasurer or Assistant Treasurer and, surrounded with proper precautions, shall act as disbursing officer of all rotating funds as may be necessary for the conduct of the Society's affairs, to be set up by the Board of Trustees and the Treasurer. Your Reference Committee approves the recommendation of the Treasurer, and I so move.

The motion was seconded.

SECRETARY IRVING I do not see why it is necessary for this House of Delegates to go into the question of the employees, the subordinate employees who are employed by the Council through me or through the Treasurer. I think it is very questionable at that point.

SPEAKER FLYNN Is there any further discussion?

DR. GEORGE W. KOSMAK Mr Speaker and Gentlemen I agree in a sense with the intention of Dr. Irving. My purpose in bringing this matter before you was to ask you to consider it. I was not at all certain that you would give it favorable consideration, but in recommending the appointment of an additional official in the office, I did so with the thought in mind that a great deal of the routine work of the Treasurer could be more efficiently carried out.

We have expanded, as I have said in my report, a great deal in recent years. The work of the Treasurer and the Assistant Treasurer has become burdensome, especially with reference to the signing of the numerous small checks and salary checks etc., and it was my belief that with the establishment of a number of rotating funds, such as we already have in force in some of our departments, this work could be carried out more effectively.

It is immaterial to me how this assistant is appointed, whether through the Council or through the General Manager, or in any other manner. The only point I wanted to carry over was that we needed a person of this kind to perform the work of the Treasurer's office more economically, more efficiently and sometimes more rapidly.

I hope therefore, that you will approve of the suggestion. I think the details as to the manner of the appointment can be left to the Council and the General Manager.

DR. WALTER D. LUDLUM *Kings* Mr Speaker it seems to me that we all would agree with Dr. Kosmak in the intention but as I read it from the Constitution the officers of the Society shall be so-and-so, so-and-so a Treasurer and an Assistant Treasurer. Therefore, it seems to me that this involves a constitutional provision if we call him a second assistant treasurer, consequently I would ask the Speaker to rule this out of order, which will throw it in the hands of the Council the Trustees, and the Executive Officer to take care of.

SPEAKER FLYNN Would you kindly read that specific provision of the Constitution and Bylaws?

DR. LUDLUM Yes Article V, Officers.

The officers of the Society shall be a Presi-

it can be acted upon, though it may be acted upon next year in a revised form as long as notice has been given to this House of Delegates

DR CUNIFFE Yes

SPEAKER FLYNN Proceed!

51 Report of Reference Committee on New Business A on American Medical Association—Medical Care Investigation and Report on Needs

SECTION 11

DR. EDWARD R CUNIFFE This resolution, as submitted, read

"WHEREAS, it is claimed that there are many communities throughout the United States without a sufficient number of competent physicians or totally lacking the services of physicians, and

"WHEREAS, there is now an overconcentration of both general practitioners and specialists in many of the metropolitan areas throughout the country, and

"WHEREAS, it would be desirable for this available group of physicians to be afforded an opportunity to provide medical care in communities lacking a sufficient number of physicians, therefore be it

"Resolved, that the delegates of the Medical Society of the State of New York to the American Medical Association be (instructed)" which we have changed to "requested"

"to present to the House of Delegates of the American Medical Association at its next meeting the urgency of this problem and request an investigation and report by its Council on Medical Education and Hospitals and the Bureau of Medical Economics as to the extent of such medical need throughout the country and the means whereby such physicians can be made available if and where they are needed"

Your Reference Committee deleted the word "instructed" and substituted the word "requested," therefore otherwise it is practically mandatory. Often unusual circumstances arise which may make a resolution of this kind, providing for an investigation that has already been undertaken, embarrassing. We understand that a similar investigation is now being carried on, and has been for the past several months, by the American Medical Association, and if it would embarrass in any way the delegates to the American Medical Association to introduce this resolution they should not be bound to do so. Therefore we request them to introduce it as the sense of this meeting unless something occurs that would make them wish not to. With that change, I may say your Reference Committee recommends the adoption of this resolution, and I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

52 Report of Reference Committee on New Business A on 1941 Annual Meeting

SECTION 30

DR EDWARD R CUNIFFE On the following resolution received from the County of Erie in regard to the meeting of the State Society in 1941

"WHEREAS, the 1941 convention of the Medical Society of the State of New York was originally slated to be held in Buffalo, and

"WHEREAS, the President-elect, our esteemed

Dr James H Borrell, has since been called to his reward by the All Highest, therefore be it

"Resolved, that in respectful memory and in tribute to his efforts in behalf of the Medical Society of the State of New York and the Medical Society of the County of Erie, the 1941 convention of the State Society be held as planned in the City of Buffalo, and be it further

"Resolved, that we, the members of the Medical Society of the County of Erie cordially and sincerely invite the Medical Society of the State of New York to hold the 1941 convention in Buffalo in honor of our departed colleague, Dr James H Borrell,"

we approve the resolution and recommend that the Council of the State Society designate Buffalo as the meeting place for 1941. I so move.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

53 Report of the Reference Committee on Reports of the Treasurer

SECTION 7

DR P J DiNATALA The reports of the Treasurer indicate that certain changes in the conduct of the affairs of the Society are imperative and necessary. Your Committee, therefore, submits with minor changes the following recommendations of the Treasurer

1 Approval of the proposed amendment to readjust the Society's fiscal year. However, in view of the immediate necessity of bringing some order out of the present chaos of the Society's financial affairs, your Treasurer further recommends that, pending the adoption of this amendment, the House of Delegates by formal decree, order the new dues year to begin January 1, 1941, that the new fiscal year begin January 1, 1941, and the present budget as adopted for the period from July 1, 1940, to June 30, 1941, be changed so as to cover the period from July 1, 1940, to and including December 31, 1940.

Your Reference Committee approves the recommendation of the Treasurer, and I so move

SPEAKER FLYNN I am afraid that cannot be done. That is an amendment to the Constitution and has to lay over for a year. It is ruled out of order.

DR GEORGE W KOSMAK I agree perfectly with your contention, but we are faced with a sort of impasse at the present time, and I thought the House might take the situation into its own hands and temporarily provide for this change, which we hope will be accepted as a permanent thing later on.

I have discussed this matter with the Counsel. He says we have no authority to do it. However, he also admitted that we might do it, and probably nobody would say anything about it.

I would like the opinion of Counsel himself on this particular point.

SPEAKER FLYNN Mr Brosnan, will you give us your opinion, please?

MR LORENZ J BROSNAVAN There is not anything in the Bylaws that provides for the suspension of the Bylaws, so there is no authority to do that. I have told Dr Kosmak it might be

experience would warrant a further study of the situation with an attempt to continue the work in the future, particularly along the lines of a seminar

I move the adoption of this portion of the report.

The motion was seconded, and there being no discussion, it was put to a vote, and was unanimously carried

#### PNEUMONIA AND SYPHILIS CONTROL

DR. SCHIFF The report shows a continuation and even increasing interest in this subject, despite the fact that a fairly complete series of programs on this subject was given to the county medical societies two years ago. In view of the frequent introduction of new drugs and improvements in diagnostic methods, we approve the continuation of this postgraduate work not only for pneumonia control but for many other subjects, particularly syphilis

I move the adoption of this part of the Committee's report.

The motion was seconded and as there was no discussion, it was put to a vote, and was unanimously carried

DR. SCHIFF We note with approval the cooperation of the Medical College of Syracuse University, of the State Department of Health and of many individual members of our profession in rendering services which have helped not only to hold down the expense of the post-graduate work but to keep it on a high plane and recommend that acknowledgment of these services be made by a vote of the House of Delegates

I move the adoption of this part of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### SCHOOL HEALTH PROGRAM

DR. SCHIFF We concur with the conclusions of the group, representing various organizations and individuals interested in this program called together for study of this question, that work in the schools that is distinctly of a medical nature should be under the direction of a physician who should be responsible to the executive administrators or school board and not to them through an intermediary person who is not a physician, while 'matters of an educational nature should be in the hands of those who were trained to be teachers.' We further approve of the conclusion that the aims of School Health Service should be 'to provide the best type of health service possible for all school children, whether attending public or private schools, in order to impress on the child what should comprise good medical care, and that the advice given to children should be based only on complete and careful examination.'

We approve the recommendation of the Committee that a change be made in the organization of the present Division of Health and Physical Education, preferably that the present bureau of health service be transferred to the State Department of Health but that if this is not possible, such a division be organized in the State Department of Education and that to it be assigned all medical problems while the teaching of health, including physical education be left as at present in the Division of

Physical Education of the State Department of Education so that the teaching of health would be in the Department of Education as heretofore, while the supplying of health service would be either in the State Department of Health or in a separate division headed by a medical man

To this we would add an additional recommendation that in the administration of Health Service in the schools the employment of private physicians be encouraged wherever possible

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### PUBLIC HEALTH LABORATORIES

DR. SCHIFF We commend the action taken by the Council Committee in reference to a memorial presented by the Council of the New York State Association of Public Health Laboratories in regard to a more effective use of laboratories by physicians

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### OPHTHALMOLOGIC PROBLEMS

DR. SCHIFF We approve the appointment by the Council of an Advisory Committee on Ophthalmologic Problems

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### CANCER

DR. SCHIFF We note that the Council Committee on Public Health and Education has cooperated with the State Department of Health in organizing a new Division on Cancer in that Department, and has been of assistance in the issuing of the forms used

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried

#### 4-H CLUBS

DR. SCHIFF The Committee has laid the foundation for work with great possibilities of expansion in this service to the 4-H Clubs. This is based on the idea that Health, one of the 4-H's should be considered seriously both from the viewpoint of health instruction and actual health examination of the 4-H Club members. The thought and practice previously in this organization has been mostly along lines similar to those of judging livestock or vegetable exhibits at a county fair and the giving of prizes for the healthiest looking child. In expanding this thought to cover health instruction and constructive health examination, an opportunity is opened for local medical societies to take a leading part in the work. We recommend that the Committee continue with its services and enlist the interest of the local medical societies in the health work of the local 4-H Clubs

I move the adoption of this portion of the Committee's report.

dent, a President-elect who shall serve as First Vice-President, a Second Vice-President, a Secretary and Assistant Secretary, a Treasurer, an Assistant Treasurer, a Speaker, and a Vice-Speaker of the House of Delegates "

It seems to me to name this man assistant treasurer or second assistant treasurer would be appointing an officer, which can only be done by an amendment to the Constitution I am simply seeking an easy way out of the situation that we are in, and I am not disputing the intentions of the Treasurer

DR ARTHUR J BEDELL, *Albany* A question of information, is this really germane, and is it not as the Speaker has said involving a change in the Constitution, which cannot properly be acted on at this Session of the House?

SPEAKER FLYNN I thought, myself, that Dr Ludlum's point was well taken, and I so rule It is out of order

DR BEDELL Right

DR. KOSMAK May I have one word more? I simply asked in my report that the matter be considered I said "consider the appointment of a second assistant treasurer" You can do it any way you want, as long as you give me the help, I don't care

DR HARRY ARANOW, *Bronx* Would an amendment be out of order?

SPEAKER FLYNN It would The motion is out of order, so you cannot amend a motion that is out of order Appointing a new officer would require a change in the Constitution

DR ARANOW I am talking to the resolution then Why not change the words "second assistant treasurer," and say "assistant in the treasurer's department?" That would immediately make the thing possible

SPEAKER FLYNN The motion has been ruled out of order, so I can entertain no amendments

DR KOSMAK But he is amending the motion

SPEAKER FLYNN You cannot amend a motion that is out of order

DR ARANOW Would you mind—

SPEAKER FLYNN The motion is out of order The Speaker ruled the motion out of order

DR DiNATALE Your Reference Committee wishes to commend the Treasurer on the diligence and efficiency with which he has conducted the financial affairs of the Society He has devoted considerable time and effort to this task and his work has been a large factor in maintaining the financial position of the Society

I move the adoption of the Report of the Reference Committee, as amended and ruled out of order

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### 54 Report of Reference Committee on Report of Board of Trustees

##### SECTION 8

DR. PETER J DiNATALE Your Reference Committee approves the report of the Board of Trustees, as printed in the annual report, except paragraph No 6 It is our opinion that the present arrangement with the bank is sound and has served satisfactorily We, therefore, recommend the continuation of the present arrangement I move the adoption of the Committee's recommendation

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### AUDITORS STATEMENT

##### SECTION 7

DR DiNATALE The Reference Committee has read the auditors' statement and notes that the auditors have made only a perfunctory examination of the records of the Society and that they state that they did not make a detailed audit of the transactions Your Committee feels that the finances of the Society are an important item in the conduct of the business affairs of the Society and a complete report and study is necessary to give the members a true picture of the financial activity of the Society Your Committee recommends that in the future the auditors make a more comprehensive and detailed audit and that such audit be presented to the members of the Society in such a manner that each member can readily understand the same

I move the adoption of that portion of the report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

SPEAKER FLYNN Just a minute, Dr Di Natale! There was no motion to accept the report as a whole on the Board of Trustees' report

DR DiNATALE I make that motion, to accept the report as a whole

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### 55 Report of the Reference Committee on Report of the Council—Part I

##### POSTGRADUATE MEDICAL EDUCATION

DR LEO F SCHIFF Your Committee has considered the Report of the Council—Part I We note under the heading "Postgraduate Medical Education" that ten Postgraduate Courses had been given between July 1 and December 1, 1939, and that eight more were being arranged for up to July 1, 1940, with the probability of further requests from other county societies

The Council Committee on Public Health and Education indicate that the appropriation may not be sufficient to completely carry out their program It is evident that the Postgraduate Medical Course of weekly lectures is the type of postgraduate education that appeals most to the members of this Society Inasmuch as these Postgraduate Lectures constitute the most tangible contact of many of our members with the State organization and with the possibility of an increase in this type of work through the activities of the subcommittee on Maternal Welfare, to be considered later in this report, it is highly desirable that this program be continued and expanded to the limit of funds available for this purpose

We note that the Institute on *Nutrition and Diet* was held in four daily sessions at intervals of one week in the latter part of October and the beginning of November

Although the attendance did not meet expectations of the Committee a great deal was learned We concur in the conclusion that the

experience would warrant a further study of the situation with an attempt to continue the work in the future, particularly along the lines of a seminar

I move the adoption of this portion of the report.

The motion was seconded, and there being no discussion, it was put to a vote, and was unanimously carried

#### PNEUMONIA AND SYPHILIS CONTROL

DR. SCHIFF The report shows a continuation and even increasing interest in this subject, despite the fact that a fairly complete series of programs on this subject was given to the county medical societies two years ago. In view of the frequent introduction of new drugs and improvements in diagnostic methods, we approve the continuation of this postgraduate work not only for pneumonia control but for many other subjects, particularly syphilis

I move the adoption of this part of the Committee's report.

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried

DR. SCHIFF We note with approval the cooperation of the Medical College of Syracuse University, of the State Department of Health, and of many individual members of our profession in rendering services which have helped not only to hold down the expense of the postgraduate work but to keep it on a high plane and recommend that acknowledgment of these services be made by a vote of the House of Delegates

I move the adoption of this part of the Committee's report

The motion was seconded, and as there was no discussion it was put to a vote, and was unanimously carried

#### SCHOOL HEALTH PROGRAM

DR. SCHIFF We concur with the conclusions of the group, representing various organizations and individuals interested in this program called together for study of this question, that work in the schools that is distinctly of a medical nature should be under the direction of a physician who should be responsible to the executive administrators or school board, and not to them through an intermediary person who is not a physician, while matters of an educational nature should be in the hands of those who were trained to be teachers. We further approve of the conclusion that the aims of School Health Service should be to provide the best type of health service possible for all school children whether attending public or private schools, in order to impress on the child what should comprise good medical care and that the advice given to children should be based only on complete and careful examination."

We approve the recommendation of the Committee that a change be made in the organization of the present Division of Health and Physical Education, preferably that the present bureau of health service be transferred to the State Department of Health, but that if this is not possible, such a division be organized in the State Department of Education and that to it be assigned all medical problems, while the teaching of health, including physical education be left as at present in the Division of

Physical Education of the State Department of Education, so that the teaching of health would be in the Department of Education as heretofore, while the supplying of health service would be either in the State Department of Health or in a separate division headed by a medical man "

To this we would add an additional recommendation that in the administration of Health Service in the schools, the employment of private physicians be encouraged wherever possible.

I move the adoption of this portion of the Committee's report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### PUBLIC HEALTH LABORATORIES

DR. SCHIFF We commend the action taken by the Council Committee in reference to a memorial presented by the Council of the New York State Association of Public Health Laboratories in regard to a more effective use of laboratories by physicians

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I move the adoption of this portion of the Committee's report.



dent, a President-elect who shall serve as First Vice-President, a Second Vice-President, a Secretary and Assistant Secretary, a Treasurer, an Assistant Treasurer, a Speaker, and a Vice-Speaker of the House of Delegates"

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SPEAKER FLYNN I thought, myself, that Dr Ludlum's point was well taken, and I so rule. It is out of order.

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SPEAKER FLYNN It would. The motion is out of order, so you cannot amend a motion that is out of order. Appointing a new officer would require a change in the Constitution.

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DR DiNATALE Your Reference Committee wishes to commend the Treasurer on the diligence and efficiency with which he has conducted the financial affairs of the Society. He has devoted considerable time and effort to this task and his work has been a large factor in maintaining the financial position of the Society.

I move the adoption of the Report of the Reference Committee, as amended and ruled out of order.

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DR. PETER J DiNATALE Your Reference Committee approves the report of the Board of Trustees, as printed in the annual report, except paragraph No. 6. It is our opinion that the present arrangement with the bank is sound and has served satisfactorily. We, therefore, recommend the continuation of the present arrangement. I move the adoption of the Committee's recommendation.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

#### AUDITORS STATEMENT

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I move the adoption of that portion of the report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

SPEAKER FLYNN Just a minute, Dr DiNatale! There was no motion to accept the report as a whole on the Board of Trustees' report.

DR DiNATALE I make that motion, to accept the report as a whole.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried.

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DR. LEO F SCHIFF Your Committee has considered the Report of the Council—Part I. We note under the heading "Postgraduate Medical Education" that ten Postgraduate Courses had been given between July 1 and December 1, 1939, and that eight more were being arranged for up to July 1, 1940, with the probability of further requests from other county societies.

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We note that the Institute on Nutrition and Diet was held in four daily sessions at intervals of one week in the latter part of October and the beginning of November.

Although the attendance did not meet expectations of the Committee, a great deal was learned. We concur in the conclusion that the

DR. SCHIFF And now, Mr Speaker, I move the adoption of the report of our Reference Committee as a whole.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

SPEAKER FLYNN Are there any other resolutions?

## 56 Social Security Law—Provision for Physicians

DR. FRANCIS N KIMBALL, *New York* I would like to present the following resolution

"WHEREAS, the practicing physician approaches old age with a declining capacity to earn an adequate income, and

"WHEREAS, the physician during his many years of activity does much work for the community without any remuneration, and

"WHEREAS, the policy of the Federal Government is having a strong trend to furnish security in old age, and

"WHEREAS, the Government's Social Security Program does not include provision for the physician's old age, therefore be it

"Resolved, that we instruct our delegates to the American Medical Association to introduce suitable resolutions to have the A.M.A. induce the Federal Government to extend the scope of the security laws to make special provisions for the security of the physicians in their old age."

SPEAKER FLYNN I will refer this resolution to Reference Committee on New Business B, of which Dr Moore is Chairman

## 57 Regional and General Anesthesia Section

### SECTION 72

DR. J LEWIS AMSTER, *Bronx* I would like to present this resolution

"WHEREAS, the art and science of anesthesiology (regional and general anesthesia in all its forms, and all that pertains to it, including resuscitation and inhalation therapy) has made rapid progress in the past fifteen years, and

"WHEREAS, there are now more than 400 anesthetists and surgeons, members of the Medical Society of the State of New York who are limiting their practice to anesthesia or specializing in the field of regional anesthesia, and

WHEREAS, in a number of states there have been established sections on regional and general anesthesia or anesthesiology in their respective state medical societies, and

WHEREAS, this specialty has been recognized by the American College of Surgeons, the American Hospital Association, the Advisory Board for Medical Specialties, and by the Council of Education and Hospitals of the American Medical Association, by having approved the establishment of the American Board of Anesthesiology, and

WHEREAS, for the past several years there has been a regular Session on Regional and General Anesthesia in the Medical Society of the State of New York now be it

Resolved, that a regular Section in this specialty be established"

SPEAKER FLYNN This will be referred to Reference Committee on New Business C, of which Dr Masterson is the Chairman.

## 58 Medical Expense Indemnity Insurance Plans

### SECTION 61

DR. JAMES L REULING, *Queens* By instructions of the Comitia Minor of the Medical Society of the County of Queens, I wish to present the following resolution

"WHEREAS, there are springing up many non-profit medical expense indemnity insurance companies in various parts of the State, some of whom already have permits to operate, and

"WHEREAS, solicitation of physician membership either with or without registration fee has been begun, and

"WHEREAS, no official approval has been given by the Medical Society of the State of New York, and in most instances, the local county medical societies have not as yet been given approval to any plan, therefore be it

"Resolved, that this House of Delegates go on record as disapproving such registration by members of the Medical Society of the State of New York until such medical expense plans have been approved by the State Society or its component county societies"

SPEAKER FLYNN This will be referred to the Reference Committee on New Business A, of which Dr Edward Cunniffe is the Chairman

## 59 Medical Practice Act—Study of Enforcement and New York State Annual Report

### SECTION 66

DR. E C WOOD, *Westchester* This is being presented on behalf of the Medical Society of the County of Westchester

"WHEREAS, every licensed physician in the State of New York is assessed a registration fee annually to provide funds which are presumably devoted to enforcement of the Medical Practice Act, and

"WHEREAS no information is officially and regularly available to the physicians of the State of New York as to the methods employed and results obtained in the enforcement of the Medical Practice Act by the State Education Department, be it

'Resolved that the Council of the Medical Society of the State of New York designate a committee to study the enforcement of the Medical Practice Act, the personnel employed, procedures used, results obtained, and possible improvements in enforcement, and be it further

Resolved, that the State Education Department be requested to publish an annual report on this subject for the information of the physicians of the State."

SPEAKER FLYNN This resolution will be referred to Reference Committee on New Business B, of which Dr Moore is Chairman

Are there any further resolutions?

(There was no response.)

SPEAKER FLYNN Apparently there are none.

Are there any reports of reference committees?

(There was no response.)

I thought if we could carry on a little longer we might recess until tomorrow morning at 9 30

DR. WALTER D LUDLUM, *Kings* I think we have too much business to leave out the evening session tonight.

SPEAKER FLYNN We have surprisingly little left

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### MATERNAL WELFARE SECTION 9

DR. SCHIFF This part of the report of the Council consists in the main of the report of a special committee on Maternal Welfare appointed under the terms of a resolution adopted by the House of Delegates at the annual meeting in 1937

The report cites the work being done in this field and notes the needs of a comprehensive program for this state

In accordance with the recommendation of this special committee, the Council directed the division of the State into twelve regions and has authorized the appointment by the President of a regional consultant in obstetrics in each region, planning at a later date to have pediatric consultants similarly appointed. The Council has approved the Committee's outline of the duties of these regional consultants as follows

- 1 Survey of maternity facilities
- 2 Stimulate and provide county societies with maternal and child health program
- 3 Provide postgraduate refresher courses so far as possible
- 4 Distribution of literature and standards
- 5 Accumulate all state and county statistics applicable to the problem of maternal and child welfare
- 6 Plan for obstetric conference in each county or in each region—time, place and frequency to depend upon the amount and character of the material. Preventability, not responsibility, is to be discussed, and controllable factors discovered
- 7 Study neonatal deaths, stillbirths, and particularly the problems of the premature infant.

We recommend that the Council's action be approved, and I move the adoption of this portion of the Committee's report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. SCHIFF Space was provided for a meeting of the regional consultants with the Maternal Welfare Committee at the Waldorf-Astoria on the date of the Delegates' Meeting, May 6. We are informed that only two of these consultants appeared at the meeting. Since it is highly essential at least one conference of these regional consultants be held with the central committee for purpose of organization, we recommend that another attempt be made to hold such a meeting in the near future with the necessary traveling expenses for the consultants paid for by the State Society

I move the adoption of this portion of the Committee's report

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

DR. SCHIFF The Committee recommends that it be given space in the State JOURNAL for the publication of material for the general practitioner under the heading of "Maternal Welfare." This recommendation has been adopted by the Council and we recommend its approval

by this House. The Committee further recommends, with the approval of the Council, that the Council Committee on Public Health and Education cooperate in the matter of post-graduate lectures in obstetrics. We approve of this recommendation. Your Reference Committee feels that the Special Committee is to be commended for the work it has done and the plans that it has made for the continuation of the work. In spite of the apparent meager results of great effort today, we feel that, now more than ever, it is necessary to continue with the effort. It sometimes take considerable time to overcome inertia, but once that is accomplished momentum is acquired rapidly

The question has been brought up as to whether this Special Committee on Maternal Welfare shall continue to function as a Special Committee or shall have its function taken over by the Council Committee on Public Health and Education. Maternal Welfare is an extremely important subject with many ramifications. The present Council Committee on Public Health and Education has many duties on its hands. We feel that it would be better to continue the present Special Committee as a special advisory committee, acting under the Council Committee on Public Health and Education, at least for the present, until the organization of the various regional and county units have been completed

I move the adoption of this portion of the Committee's report.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

#### OTHER MATTERS

DR. SCHIFF We commend the cooperation shown by the JOURNAL in arranging for all Public Health Notes for publication to be submitted through the Council Committee as well as providing for articles prepared by a member of the Committee

The report also refers to legislation, relative to the long range State Health Program being promulgated by the State's Temporary Legislative Commission. Since this part of the report deals only with information, and, since the legislative aspect of this matter is taken up by another reference committee, no action is required on them by the House of Delegates

I move the adoption of this portion of the Committee's report

There being no discussion, the motion was put to a vote, and was unanimously carried

#### DEAF AND HARD OF HEARING SECTION 9

DR. SCHIFF In a supplementary report is recorded the disappointment of the Council over the failure of the 1940 Legislature to pass a bill drafted to take care of the hard of hearing children by providing lip reading instruction for about 65,000 children in the State. The Council believes that an effort should be made again next year to have the Legislature pass such a bill. We recommend the approval of this recommendation

I move the adoption of this part of the Committee's report.

The motion was seconded and as there was no discussion it was put to a vote, and was unanimously carried

DR. SCHIFF And now, Mr Speaker, I move the adoption of the report of our Reference Committee as a whole.

The motion was seconded, and as there was no discussion, it was put to a vote, and was unanimously carried

SPEAKER FLYNN Are there any other resolutions?

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DR. FRANCIS N KIMBALL, *New York* I would like to present the following resolution

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'WHEREAS, the physician during his many years of activity does much work for the community without any remuneration, and

"WHEREAS, the policy of the Federal Government is having a strong trend to furnish security in old age, and

"WHEREAS, the Government's Social Security Program does not include provision for the physician's old age, therefore be it

"Resolved, that we instruct our delegates to the American Medical Association to introduce suitable resolutions to have the A.M.A. induce the Federal Government to extend the scope of the security laws to make special provisions for the security of the physicians in their old age."

SPEAKER FLYNN I will refer this resolution to Reference Committee on New Business B, of which Dr Moore is Chairman.

## 57 Regional and General Anesthesia Section SECTION 72

DR. J LEWIS AMSTER, *Bronx* I would like to present this resolution

"WHEREAS, the art and science of anesthesiology (regional and general anesthesia in all its forms, and all that pertains to it, including resuscitation and inhalation therapy) has made rapid progress in the past fifteen years, and

'WHEREAS, there are now more than 400 anesthetists and surgeons, members of the Medical Society of the State of New York, who are limiting their practice to anesthesia or specializing in the field of regional anesthesia, and

'WHEREAS, in a number of states there have been established sections on regional and general anesthesia or anesthesiology in their respective state medical societies, and

WHEREAS, this specialty has been recognized by the American College of Surgeons, the American Hospital Association the Advisory Board for Medical Specialties, and by the Council of Education and Hospitals of the American Medical Association, by having approved the establishment of the American Board of Anesthesiology, and

WHEREAS, for the past several years there has been a regular Session on Regional and General Anesthesia in the Medical Society of the State of New York, now be it

Resolved, that a regular Section in this specialty be established "

SPEAKER FLYNN This will be referred to Reference Committee on New Business C, of which Dr Masterson is the Chairman.

## 58 Medical Expense Indemnity Insurance Plans

### SECTION 61

DR. JAMES L REULING, *Queens* By instructions of the Comitia Minor of the Medical Society of the County of Queens, I wish to present the following resolution

"WHEREAS, there are springing up many non-profit medical expense indemnity insurance companies in various parts of the State, some of whom already have permits to operate, and

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"WHEREAS, no official approval has been given by the Medical Society of the State of New York, and in most instances, the local county medical societies have not as yet been given approval to any plan, therefore be it

"Resolved, that this House of Delegates go on record as disapproving such registration by members of the Medical Society of the State of New York until such medical expense plans have been approved by the State Society or its component county societies "

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### SECTION 66

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Resolved that the Council of the Medical Society of the State of New York designate a committee to study the enforcement of the Medical Practice Act, the personnel employed, procedures used, results obtained, and possible improvements in enforcement, and be it further

'Resolved, that the State Education Department be requested to publish an annual report on this subject for the information of the physicians of the State."

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Are there any further resolutions?

(There was no response)

SPEAKER FLYNN Apparently there are none. Are there any reports of reference committees?

(There was no response.)

I thought if we could carry on a little longer we might recess until tomorrow morning at 9 30

DR. WALTER D LUDLUM *Kings* I think we have too much business to leave out the evening session tonight.

SPEAKER FLYNN We have surprisingly little left

60 Reconsideration Asked of Report of Reference Committee on Report of the Council—  
Part I—Relative to School Health Program

SECTION 55

DR ARTHUR F HEYL, *Westchester* A point of information relative to one of the resolutions read by Dr Schiff for his Committee and adopted relative to the measures being taken to place the responsibility for the medical phase of the State Education Department in the hands of the State Department of Health, and failing that then some other recommendation, I believe that many of us were half asleep when that resolution was carried without discussion. That is why I mention it at this time, with the idea of making a motion for reconsideration of that vote for this reason. That a year ago a resolution was proposed favoring pressure through the Council for the re-establishment of the former practice of having the head of the Department of Education a physician, and doing away with the present setup of that director being a physical director. Under this resolution steps are to be taken to place the Department in the hands of the State Board of Health, the medical phases of it, and I am wondering if that may not over a few years give the State Board of Health too much leeway in the development through the schools of more and more bureaucratic care with an end that State Medicine in the future will more easily appeal to these children educated under that setup when they get to adulthood.

I don't know whether I have made it quite clear, but I hope I have brought it up for a point of discussion. So that I move for reconsideration of that vote.

DR PHILIP I NASH, *Kings* I move that this body recess until 9 30 tomorrow morning.

DR LAWRENCE D REDWAY, *Westchester* I second the motion to reconsider.

SPEAKER FLYNN You both voted in the affirmative, so you have the right to make that motion. It will take a two-thirds vote.

There was no further discussion, and the motion was put to a vote, and was carried.  
(Continued in Evening Session)

DR. THOMAS B WOOD, *Kings* I move we recess until eight o'clock tonight.

SPEAKER FLYNN Very well, we will recess until eight o'clock this evening.

DR ARTHUR J BEDELL, *Albany* I move to amend that when we adjourn, we adjourn until nine o'clock tomorrow morning.

The amendment was seconded.

SPEAKER FLYNN The motion is on the amendment by Dr Bedell to recess until tomorrow morning at nine o'clock. All those in favor of that amendment say "Aye", those opposed say "No." The motion is lost.

The Chair will rule that we will recess, therefore, until 8 30 tonight.

DR BEDELL I protest your ruling, and ask that we have a real decision on that. There is some question.

SPEAKER FLYNN You have had a real decision. Your amendment was lost. One delegate wanted us to adjourn until 8 00 and another until 9 00, so the Chair ruled 8 30.

DR. BEDELL I question the count as to whether it was lost or not.

SPEAKER FLYNN Very well, we will go back and have a recount.

DR THOMAS B WOOD, *Kings* In discussing that may I say that we are here to complete the business tonight according to the program. We have set aside our evening for that purpose, and if we now adjourn until tomorrow morning that leaves us with nothing to do but to go out and perhaps drink some beer, and nothing will have been accomplished.

SPEAKER FLYNN The question is on the amendment of Dr Bedell's to recess until nine o'clock tomorrow morning. All those in favor had better stand.

The minority arose.

DR BEDELL I concede it.

SPEAKER FLYNN Now those in favor of coming back at 8 30 this evening will kindly stand.

The majority arose.

SPEAKER FLYNN We will, therefore, take a recess until 8 30 this evening.

The session recessed at 6 15 P M

## CLINICAL CONFERENCE TO BE HELD

The Metropolitan New York Chapter and the New Jersey Chapter of the Association of Military Surgeons of the United States will hold a clinical conference for medicomilitary officer personnel at United States Marine Hospital Stapleton, Staten Island, New York, on Saturday June 22, 1940.

There will be general inspection and ward rounds at 10 30 A M. A special luncheon will be served to visitors at noon (fifty cents per person).

At 1 00 P M and thereafter interesting clinical presentations will be held for groups. Included on the agenda are (1) coronary diseases, (2) diseases of the genitourinary tract, and (3) gastric ulcers, medical, and surgical aspects.

All officers and prospective officers of the medical departments of the armed forces of the United States are cordially invited to be present.  
Charles W. Naulty, Jr., A.A. Surgeon

USPHS, is the medical officer in charge of arrangements of this worthwhile and timely conference, which is being held through the courtesy of Surgeon William Y. Hollingsworth, USPHS medical officer in charge of the hospital. Assisting are Admiral James C. Pryor, M.C., U.S.N., Colonel Samuel Adams Cohen, Med-Res, U.S.A., and Lieutenant S.C. Bostic, M.C., O-U.S.N.R., for the Metropolitan New York Chapter and Colonel Albert G. Hulett, Med-Res, U.S.A. Lieutenant Colonel Albert W. Sweet, Sn-Res, U.S.A., for the New Jersey Chapter.

The hospital can be reached by auto over the Outerbridge from Perth Amboy, the Goethal Bridge from Elizabeth, or by municipal ferry from South Ferry, New York City to St. George where city bus runs every few minutes to the street corner in front of the hospital.

# The Woman's Auxiliary

## To the Medical Society of the State of New York

**B**ECAUSE of the activities of the New York State Convention held in May, it has been necessary for "County News" to be minimized

But we shall endeavor to give more detailed news in the forthcoming issues of the JOURNAL

### County News

**Cayuga.** A recent meeting of interest, at which Mr C L Kollenborn of the Children's Home, Auburn, gave a talk on the splendid activity and work carried on at the home was attended by twenty-eight members. A social hour and bridge followed.

Five members attended the State Convention in New York City. Mrs G C Sincerbeaux, Mrs S Karpinski, Mrs B Cullen, Mrs G Adams, and Mrs H Bull. At this time Mrs George B Adams was elected to the office of president-elect to the Woman's Auxiliary of New York State. The delegates to the State Convention from this county for 1941 are Mrs R Johnson and Mrs J Wiley.

**Fulton.** Although Fulton County is newly organized, its meetings have been most interesting. Dr A R Wilsey and Dr Everett Perkins, of Gloversville, were speakers on venereal and prenatal clinics and their importance to a community. Twenty members were in attendance and enjoyed the social hour after the meeting.

Mrs J E Grant and Mrs B G McKillip, president, were at the State Convention.

**Kings.** The Woman's Auxiliary, of which Mrs Milton Bergman is president, gave a membership tea at the Neighborhood Club, 104 Clark Street, Brooklyn, on April 9. Mrs H Lilly and Mrs H Wilkie were the speakers.

A luncheon meeting was held on May 28 at the Herb Garden at Huntington, Long Island.

**Queens.** Queens County had at its April meeting Dr Sigmund Epstein, of New York City, whose topic was "A Satire on Surgery and Art." A well-attended luncheon and bridge at the Colonial House in Flushing was enjoyed on May 20, followed by an "Information Please" program. Mrs J M Dobbins, Mrs M Coe, and their committees are to be congratulated for the success of the affair. Several delegates from Queens County attended the State Convention.

**Rensselaer.** The Rensselaer County Auxiliary held an interesting meeting at the Samaritan

Hospital in April. Mrs L Deal spoke on the aims and purposes of the Troy Woman's Club.

Mrs A W Benson reported on health bills, especially expressing the deep regret of the American Medical Association at the defeat of the Hastings-Williams Bill for Crippled Children, which means that some 65,000 handicapped children will not receive educational training.

The annual dinner-dance was a huge success. Schenectady. The first public health forum was held in Schenectady County under the sponsorship of the Woman's Auxiliary with the aid of the Medical Society. The control of cancer was the theme for the afternoon meeting.

Dr J M Swan, executive secretary for the American Society for the Control of Cancer, and Dr Louis C Kress, director of the Division of Cancer Control of the State Department of Health, were the guest speakers. Other topics discussed were "Bleeding from the Bowel" by Dr F L Sullivan, "Lump in the Breast," Dr S F MacMillan, "Hoarseness," Dr A G Penta, "Urinary Bleeding," Dr J Frumkin, "Cancer of the Cervix," Dr H D Lester, "Tumor of the Brain," Dr I Shapiro.

The evening meeting was devoted to topics of general interest. Dr J M Blake, director of the Schenectady County Tuberculosis Sanitarium, spoke on "What One Should Know About Tuberculosis," Dr A H Congdon, on "Allergy and Its Relation to Everyday Contacts," Dr A Grusser, on "Acute Abdomen," Dr A Korlosz, on "The Problem of Varicose Veins," Dr C F Rourke, on "Asthma."

The gratifying results of this institute was that three-fourths of the audience was made up of persons in no way connected with the medical profession.

**Sullivan.** Welcome to our fold is the Sullivan County Auxiliary. Mrs R S Breakey, president, held a meeting at her home in Monticello, at which Mrs Harry Pullman was the speaker.

This club is busy supporting and assisting the tuberculosis drive of the Health Association.

### Deaths of New York State Physicians

Name	Age	Medical School	Date of Death	Residence
Howard A Bayles	62	P & S N Y	May 20	Port Chester
Nathan Cohen	56	L I C Hosp	May 5	Brooklyn
Leonard E Curtice	71	Niagara	March 31	Buffalo
Irving Darche	38	Univ & Bell	May 17	Brooklyn
Charles R. Haskin	57	P & S Balt	October 13	Chautauqua
John W Keeler, Jr	59	Univ Md	February 8	Hammondsport
Monroe J Polk	—	P & S N Y	March 4	Manhattan
H Austin Smith	46	N Y Hom	May 13	Manhattan
George T Tyler	66	Medico-Chirurg Phila	March 15	Manhattan
Louis Wheeler	62	Baltimore Med	May 15	Tully

# Books

Books for review should be sent to the Book Review  
Brooklyn N Y Acknowledgment will be made in  
notification Selection for review will be based on

## REVIEWED

**Handbook of Skin Diseases** By Leon H Warren, M D Duodecimo of 321 pages New York, Paul B Hoeber, Inc., 1940 Cloth, \$3 50

Doctor Warren has well named his work, for it is at once not only a handbook and a practical guide to diagnosis and treatment of skin diseases but a perfect godsend to the practitioner and student whose training in the selection and preparation of the best remedies for skin ills has been sadly neglected In the first of the two chapters which make up the contents of this book, the author has given a most complete and informative dissertation on the general principles of therapy In our opinion this one chapter is worth more than the price of the book itself, and even the most advanced student or practitioner of dermatology will find in its pages information of the greatest value Every remedy of any worth is estimated and its method of exhibition thoroughly explained Ointments, powders, lotions, pastes, and emulsions of the various oils and fats are presented in their best form, and the beginner in dermatology has placed in his hands the wherewithal to become successful

The salient features of some 250 skin diseases are well but succinctly presented, and lines of treatment are indicated for each The author has emphasized the internal medical rather than the purely morphologic concept of skin diseases, a factor which adds greatly to the work The publishers have produced a handy desk-book which measures up to their usual standard of fine printing and good taste

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MEETING OF THE NEW YORK STATE SCHOOL PHYS  
YORK STATE NURSE-TEACHERS' ASSOCIATION AT S  
Headquarters at the Grand Union Hotel (All 7 00 P M  
Sessions Scheduled on Daylight Saving Time)

2 00 P M. Afternoon Session

8 00 P M

- 1 Presidential Address  
L A Van Kleeck, M D  
Manhasset
- 2 How a School Nurse-Teacher Spends Her  
Time  
Mary T Fay  
President, New York State School Nurse-  
Teachers' Association  
Garden City
- 3 The Examination of School Personnel  
E H Ormsby, M D  
Amsterdam  
Discussion opened by William Ayling,  
M D, Syracuse
- 4 The Laboratory Studies on and Intensive  
Follow-up of High School Athletes  
L S Preston, M D  
Oneida  
Discussion opened by C A Greenleaf,  
M D, Olean, and C S Wallace, M D,  
Ithaca

On Tuesda  
be a luncheon  
Nurse-Teache  
Worden

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